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VOL. XV

KARĀCHI TO KOTĀYAM

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INTRODUCTORY NOTES

Notes on Transliteration

Vowel-Sounds

a has the sound of *a* in 'woman.'
ā has the sound of *a* in 'father.'
e has the vowel-sound in 'grey.'
i has the sound of *i* in 'pin.'
ī has the sound of *i* in 'police.'
o has the sound of *o* in 'bone.'
u has the sound of *u* in 'bull.'
ū has the sound of *u* in 'flute.'
ai has the vowel-sound in 'mine.'
au has the vowel-sound in 'house.'

It should be stated that no attempt has been made to distinguish between the long and short sounds of *e* and *o* in the Dravidian languages, which possess the vowel-sounds in 'bet' and 'hot' in addition to those given above. Nor has it been thought necessary to mark vowels as long in cases where mistakes in pronunciation were not likely to be made.

Consonants

Most Indian languages have different forms for a number of consonants, such as *d*, *t*, *r*, &c., marked in scientific works by the use of dots or italics. As the European ear distinguishes these with difficulty in ordinary pronunciation, it has been considered undesirable to embarrass the reader with them; and only two notes are required. In the first place, the Arabic *k*, a strong guttural, has been represented by *k* instead of *q*, which is often used. Secondly, it should be remarked that aspirated consonants are common, and, in particular, *dh* and *th* (except in Burma) never have the sound of *th* in 'this' or 'thin,' but should be pronounced as in 'woodhouse' and 'boathook.'

Burmese Words

Burmese and some of the languages on the frontier of China have the following special sounds:—

aw has the vowel-sound in 'law.'
ö and ü are pronounced as in German.
gy is pronounced almost like *j* in 'jewel.'
ky is pronounced almost like *ch* in 'church.'
th is pronounced in some cases as in 'this,' in some cases as in 'thin.'
w after a consonant has the force of *uw*. Thus, *ywa* and *pwe* are disyllables, pronounced as if written *yuwa* and *puwe*.

It should also be noted that, whereas in Indian words the accent or stress is distributed almost equally on each syllable, in Burmese there is a tendency to throw special stress on the last syllable.

General

The names of some places—e.g. Calcutta, Bombay, Lucknow, Cawnpore—have obtained a popular fixity of spelling, while special forms have been officially prescribed for others. Names of persons are often spelt and pronounced differently in different parts of India; but the variations have been made as few as possible by assimilating forms almost alike, especially where a particular spelling has been generally adopted in English books.

NOTES ON MONEY, PRICES, WEIGHTS AND MEASURES

As the currency of India is based upon the rupee, all statements with regard to money throughout the *Gazetteer* have necessarily been expressed in rupees, nor has it been found possible to add generally a conversion into sterling. Down to about 1873 the gold value of the rupee (containing 165 grains of pure silver) was approximately equal to 2*s*., or one-tenth of a £; and for that period it is easy to convert rupees into sterling by striking off the final cipher (Rs. 1,000 = £100). But after 1873, owing to the depreciation of silver as compared with gold throughout the world, there came a serious and progressive fall in the exchange, until at one time the gold value of the rupee dropped as low as 1*s*. In order to provide a remedy for the heavy loss caused to the Government of India in respect of its gold payments to be made in England, and also to relieve foreign trade and finance from the inconvenience due to constant and unforeseen fluctuations in exchange, it was resolved in 1893 to close the mints to the free coinage of silver, and thus force up the value of the rupee by restricting the circulation. The intention was to raise

the exchange value of the rupee to 1*s.* 4*d.*, and then introduce a gold standard (though not necessarily a gold currency) at the rate of Rs. 15 = £1. This policy has been completely successful. From 1899 onwards the value of the rupee has been maintained, with insignificant fluctuations, at the proposed rate of 1*s.* 4*d.*; and consequently since that date three rupees have been equivalent to two rupees before 1873. For the intermediate period, between 1873 and 1899, it is manifestly impossible to adopt any fixed sterling value for a constantly changing rupee. But since 1899, if it is desired to convert rupees into sterling, not only must the final cipher be struck off (as before 1873), but also one-third must be subtracted from the result. Thus Rs. 1,000 = £100 − ⅓ = (about) £67.

Another matter in connexion with the expression of money statements in terms of rupees requires to be explained. The method of numerical notation in India differs from that which prevails throughout Europe. Large numbers are not punctuated in hundreds of thousands and millions, but in lakhs and crores. A lakh is one hundred thousand (written out as 1,00,000), and a crore is one hundred lakhs or ten millions (written out as 1,00,00,000). Consequently, according to the exchange value of the rupee, a lakh of rupees (Rs. 1,00,000) may be read as the equivalent of £10,000 before 1873, and as the equivalent of (about) £6,667 after 1899; while a crore of rupees (Rs. 1,00,00,000) may similarly be read as the equivalent of £1,000,000 before 1873, and as the equivalent of (about) £666,667 after 1899.

Finally, it should be mentioned that the rupee is divided into 16 annas, a fraction commonly used for many purposes by both natives and Europeans. The anna was formerly reckoned as 1½*d.*; it may now be considered as exactly corresponding to 1*d.* The anna is again subdivided into 12 pies.

The various systems of weights used in India combine uniformity of scale with immense variations in the weight of units. The scale used generally throughout Northern India, and less commonly in Madras and Bombay, may be thus expressed: one maund = 40 seers; one seer = 16 chittaks or 80 tolas. The actual weight of a seer varies greatly from District to District, and even from village to village; but in the standard system the tola is 180 grains Troy (the exact weight of the rupee), and the seer thus weighs 2·057 lb., and the maund 82·28 lb. This standard is used in official reports and throughout the *Gazetteer*.

For calculating retail prices, the universal custom in India is to express them in terms of seers to the rupee. Thus, when prices change, what varies is not the amount of money to be paid for the

same quantity, but the quantity to be obtained for the same amount of money. In other words, prices in India are quantity prices, not money prices. When the figure of quantity goes up, this of course means that the price has gone down, which is at first sight perplexing to an English reader. It may, however, be mentioned that quantity prices are not altogether unknown in England, especially at small shops, where pennyworths of many groceries can be bought. Eggs, likewise, are commonly sold at a varying number for the shilling. If it be desired to convert quantity prices from Indian into English denominations without having recourse to money prices (which would often be misleading), the following scale may be adopted—based upon the assumptions that a seer is exactly 2 lb., and that the value of the rupee remains constant at 1*s.* 4*d.*: 1 seer per rupee = (about) 3 lb. for 2*s.*; 2 seers per rupee = (about) 6 lb. for 2*s.*; and so on.

The name of the unit for square measurement in India generally is the *bigha*, which varies greatly in different parts of the country. But areas have always been expressed throughout the *Gazetteer* either in square miles or in acres.

MAP

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Karāchi District.—District in Sind, Bombay, lying between 23° 35′ and 26° 22′ N. and 66° 42′ and 68° 48′ E., with an area of 11,970 square miles. It is bounded on the north by Lārkāna; on the east by the Indus and Hyderābād District; on the south by the sea and the Kori river; and on the west by the sea and the State of Las Bela (Baluchistān), the river Hab forming for a considerable distance the line of demarcation. The District, which covers a large tract of land stretching from the mouth of the Indus to the Baluchi boundary, differs considerably in appearance from the general level of Sind by its possession of a hilly western region, lying in the *mahāl* of Kohistān and the *tāluka* of Karāchi. Numerous lateral ranges of considerable height here push forward into the plain from the KĪRTHAR mountains, and diversify the usually monotonous aspect of the arid surface by their spurs and offshoots. From this lofty and barren tract, intersected by deep and wide valleys, the general aspect of the country, as it runs south-eastward in a vast sloping plain, becomes more and more level, until in the extreme south the Indus delta presents a broad expanse of low, flat alluvium, stretching away to the horizon in one unbroken sheet, varied only by the numerous creeks communicating with the ocean. Large forests of *babūl* and other trees fringe the river banks, and impart a somewhat fresher appearance to the otherwise dreary landscape. Elsewhere, however, the features of the Sind delta stand unrelieved in their naked monotony.

Physical aspects.

Apart from the INDUS and the HAB rivers, there are only a few minor torrents in the District. These take their rise in the western hills, but consist of dry watercourses for the greater portion of the year, filled only on the rare occasions when heavy rains fall on the higher ranges in which they have their sources. The Hajāmro and Baghar are offshoots of the Indus, the former now constituting the chief channel to the sea. At PĪR MANGHO there are hot springs, situated

among barren and rocky hills, and famous for their healing qualities, as well as for the crocodiles in an adjacent enclosure. Other hot sulphur springs are to be found at Lakhi in the Kotri *tāluka*, which attract a number of pilgrims every year.

In Karāchi District the highly interesting geological series of Sind is most completely developed. It consists of upper and lower Manchhar beds of upper and middle miocene age, corresponding with the Siwāliks of Baluchistān and of the Himālayas; and the Gāj group containing highly fossiliferous marine beds, whose age is lower to middle Miocene. A second series is the upper Nāri or oligocene, consisting of alternating fresh-water and marine strata; and this gives way in places to the lower Nāri or upper eocene, a highly fossiliferous Nummulitic limestone, and to the upper limestone and shales of the Nummulitic Kīrthar group, of middle eocene age, which corresponds with the Spīntangi and Ghāzij of Baluchistān. One also finds a lower limestone and shale group, likewise Nummulitic and classed as Kīrthar, but not known outside of Sind, to which nearly all the Kīrthar outcrops in Karāchi District belong. The upper Rānikot, another highly fossiliferous marine group, containing in its upper beds the oldest Nummulitic strata known in India, is approximately on the same horizon as the London Clay, and alternates with the lower Rānikot—fluviatile beds with lignites and fossil remains of plants. Other features of the series are representatives of the Deccan trap basalts; the *Cardita beaumonti* beds, which are lowermost eocene or uppermost Cretaceous; and lastly the hippuritic limestone. All these rocks outcrop, each in turn, in a succession of gentle synclinal and anticlinal folds, whose structure recalls that of the Jura mountains. There is scarcely another part of the world that contains so complete a development of the Tertiary. The southern part of the District is covered by the Indus alluvium.

Among fruit trees, which are not numerous, the mango, *ber*, apple, date, fig, plantain, and pomegranate are noticeable. The timber is almost entirely *babūl*; and the *timur* or mangrove, found near the salt creeks, provides firewood for steamers and fodder for camels. Of maritime plants, the *chāwara* and *kandel* are common on the coast. The tamarisk grows in patches which are peculiarly dense in portions of the Shāhbandar *tāluka*; while the casuarina has been planted with some success at Karāchi.

The wild animals found in the hilly portions are the leopard, hyena, wolf, jackal, fox, ibex, antelope, and *gad* or wild sheep. Crocodiles are found at Magar Talao; and they are also numerous in the pools of the Hab river, in the Indus, and in some of the large canals and mountain torrents.

The climate of Karāchi city and the neighbouring country, which is in every direction open to the sea-breeze, possesses a great superiority

over that prevailing throughout the remainder of Sind. The hill country of Kohistān is also cooler in summer and warmer in winter than is the case in the plains. In the north, on the other hand, near the barren LAKHI range of hills, the heat often becomes insupportable. The hot season commences about the middle or end of March, reaches its maximum in the month of July, and lasts till the end of August, when the temperature once more becomes tolerably cool. The annual temperature averages 79°. The rainfall at Karāchi is slight and fluctuating, the annual average hardly exceeding 5 inches. Sometimes one or two years pass with scarcely a shower. The average maximum rainfall elsewhere is 9 inches in the Karāchi *tāluka*, and the minimum 5 inches at Mānjhand.

History.

Alexander the Great, towards the close of his Indian expedition, dispatched Nearchus, doubtless from some point (suggested to be at Tatta) in this District, to explore the Persian Gulf. The date 713 marks the first Arab invasion of the District, which later resulted in the formation of the local Arab principality of Mansūra, nearly corresponding with modern SIND. Between 1019 and 1026, the invasions of Mahmūd of Ghazni took place and paved the way for the supremacy of the Sūmra dynasty, whose founder was a titular vassal of the Ghaznivids; and in 1333 the Samma tribe from Cutch settled first at Sehwān in Lārkāna District and afterwards at Tatta. Close under the Makli hills stood Samui, the capital of the Sammā princes, originally a Hindu or Buddhist race. Converted to the faith of Islām about the close of the fourteenth century, they continued to retain their practical autonomy, in spite of a nominal allegiance tendered to Firoz Tughlak of Delhi; and the town of TATTA, where they generally resided, became in after years the chief centre of population and commerce for the whole of Sind.

In 1521 Shāh Beg, founder of the Arghūn dynasty, completely defeated the last Sammā prince, and established his own claim to the sovereignty of the lower Indus valley; but, after a continuance of only thirty-four years, the Arghūn line became extinct in the person of Shāh Hasan, son of the founder, who died childless in 1554. Mirza Jānī Beg, the last local ruler of Tatta, was defeated by an army of the Mughal emperor Akbar in 1592; and the District, together with the rest of Sind, became incorporated with the Multān *Sūbah* in the imperial organization. The country of Tatta, however, was made over to Jānī Beg, who entered the Mughal service after his defeat, and compromised for his independence by accepting his former territories in *jāgīr*. Continued struggles for the governorship of Tatta led Jahāngīr to abolish the hereditary viceroyalty, and to appoint instead special lieutenants holding office during the imperial pleasure. The town of Karāchi appears to have attained little importance under either the

native dynasties or the Mughal administration. Its rise into notice began with the period of the Tālpur Mīrs, in succession to the Kalhora princes, who had usurped power on the break-up of the Mughal empire. They were the first to recognize the value of the harbour for commerce, and in 1792 recovered Karāchi from the Khān of Kalāt; but soon afterwards they divided into three branches, each ruling independently in a separate part of Sind. The British endeavoured to enter into friendly treaties with the Mīrs; but their jealousy and mistrust of the motives of the Government prevented any cordial understanding, and in 1838 they offered considerable opposition to the march of British troops on their way to the first Afghān War. After Shāh Shujā was placed on the throne, the Mīrs were required to pay the arrears of tribute due to the Afghān ruler and to permit the establishment of a British force in Sind. Failure having been made in payment of the stipulated tribute, the Mīrs were required to cede certain territory. The army, however, resisted this loss of independence, and attacking the Hyderābād Residency precipitated the conflict which ended in the annexation of Sind to the British dominions. The District passed to the British in 1843. Karāchi town grew rapidly under the new administration, and became the principal port of North-western India. The District, as at first constituted, did not embrace the same area as at present; in 1861 a portion of the Indus delta, composing the present Shāhbandar *tāluka*, was added to it from Hyderābād, while in 1901 three *tālukas* were taken from it to form part of the new District of Lārkāna.

Among the remains of interest in the District may be mentioned those situated in the town of TATTA. The town is of great antiquity, and possesses a number of tombs, inscriptions, mosques, and a fort. The Jāma Masjid is decorated with coloured tile-work of the well-known Multān type. The design and shades of colour are very beautiful. The Dabgar Masjid has a fine central *mihrāb*, carved with delicate surface tracery. The old fort at Tatta was commenced about 1699, but was never completed. The ruined city of BHAMBORE is an interesting archaeological relic. In the delta of the Indus are numerous sites of ruined cities, such as Lāhori, Kākar, Bukera, Samui, Fathbāgh, Kāt Bāmbhan, Jūn, Thari, Badin, and Tūi, as well as the remains of Dāro and Lohan. Among ruined forts once of importance are those of Charlo Chakar and Raniji.

Population.

In 1872 the population was 442,177; in 1881, 495,860; in 1891, 571,951; and in 1901, 607,828. Since the date of the last Census, a new District has been created by the transfer of certain *tālukas* from Shikārpur and Karāchi Districts. The population of the present area of Karāchi District (446,513) shows an increase of 8 per cent. over the population of the same area in 1891.

The population is distributed, as follows, in nine *tālukas* and the Kohistān tract:—

Tāluka or *Mahāl*.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Kotri*	1,485	2	62	57,530	39	+ 2	2,287
Kohistān *mahāl*	1,806	...	2	12,877	7	− 20	141
Karāchi	1,678	1	14	136,297	81	+ 10	9,590
Tatta	1,229	1	35	41,745	34	+ 12	1,425
Mirpur Sakro	1,137	...	74	27,600	24	+ 6	354
Ghorābāri	566	...	51	26,237	61	+ 14	431
Keti *mahāl*		1	42	8,499			
Mirpur Batoro	269	...	62	37,116	138	+ 5	583
Sujāwal	267	...	65	33,251	125	+ 13	530
Jāti	2,145	...	117	31,752	15	+ 14	310
Shāhbandar	1,388	...	104	33,69	24	+ 14	323
District total	11,970	5	628	446,513	37	+ 8	15,974

* Including the Manjhand *mahāl*, for which separate statistics are not available.

There are 5 towns, KARĀCHI, the capital of the province and head-quarters of the District, KETI, KOTRI, MĀNJHAND, and TATTA; and 628 villages. The density of population varies according as the tract concerned happens to be desert, barren hill, or cultivable. Of the population, 77 per cent. are Musalmāns, 21 per cent. Hindus, and 1 per cent. Christians. Sindī is spoken by 340,837 persons, or 76 per cent. of the total.

The Muhammadans consist mainly of Sindī tribes, of whom half (112,000) returned themselves as Sammās and 9,000 as Sūmras, suggesting some connexion with the once-powerful dynasties known by those names. The Muhānas or fishermen number 31,000. Of foreign tribes, the Baluchis are represented by 28,000, and the Brāhuis by 10,000. There are 17,000 Jats. Among Hindus, the trading caste known as Lohāna or Luvāna is alone of numerical importance, with 35,000. Brāhmans, Rājputs, and Bhātias scarcely number 3,000 each. The low castes are represented by 8,000 Dheds. Agriculture supports 45 per cent. of the population; industries, commerce, and the professions 24, 2, and 2 per cent. respectively.

Of the 2,707 native Christians in 1901, more than 2,500 were Roman Catholics and 129 belonged to the Anglican communion. Karāchi is the head-quarters of the Church of England Mission, the Church of England Zanāna Mission, and the Methodist Episcopal Mission. The first-named society maintains three boys' schools; the second, nine girls' schools and a small orphanage; the third, four boys' schools and four girls' schools, including two poor schools; the fourth, two boys'

schools. The Roman Catholic and Zanāna Missions have branches at Kotrī and Jherruck respectively.

Agriculture.

In the Karāchi *tāluka* cultivation exists only on a few isolated spots, and depends upon wells, springs, or natural rainfall. Here the chief crops are *jowār*, *bājra*, barley, and sugar-cane, grown chiefly on the Malir plain, distant about 12 miles from Karāchi city, and easily accessible by rail. In the delta *tālukas* of Tatta and Shāhbandar, where numerous creeks and channels intersect the alluvial flats, rice forms the staple crop; but wheat, sugar-cane, millets, cotton, and tobacco are also grown. In the barren hills of Kohistān, agriculture is but little practised, except within embankments erected to impound the scanty rainfall or along watercourses fed by small hill streams; and the nomad population devotes itself almost entirely to grazing cattle in the southern plains, where abundance of forage springs up spontaneously after the slightest fall of rain.

The chief statistics of cultivation in 1903–4 are shown below, in square miles:—

Tāluka.	Total.	Cultivated.	Irrigated.	Waste.	Forests
Kotri	3,305	329	51	79	56
Karāchi	1,678	63	0	84	...
Tatta	1,215	68	32	65	51
Mīrpur Sakro	1,137	104	35	100	...
Ghorābāri	566	102	47	240	11
Mīrpur Batoro	269	100	63	65	39
Sujāwal	267	82	53	69	47
Jāti	2,145	97	50	132	...
Shāhbandar	1,388	158	49	1,055	8
Total	11,970*	1,103	380	1,889	212

* According to the latest information.

Of the area cropped, 22 square miles were under wheat, 13 under barley, 245 under rice, and 100 under millets (*jowār* and *bājra*). Rice is the principal crop, except in the Kohistān tract and the *tālukas* of Karāchi and Kotri. Millets take the place of rice in Kotri. Among the pulses *mūng* is an important crop. During the decade ending 1903–4 nearly 9 lakhs was advanced to cultivators under the Land Improvement Loans Act and the Agriculturists' Loans Act, out of which 1·8 lakhs was lent in 1899–1900, and 1·3 lakhs in each of the years 1900–1 and 1901–2. The money is usually employed on erecting embankments (*bands*) and clearing canals.

The chief domestic animals are camels, buffaloes, and cattle. The buffaloes are commonest in the deltaic swamps, and produce *ghī* famous all over Western India. The Karāchi cows are noted as good milkers, and many of them are shipped to Bombay for sale. The best of these

cattle are bred within a radius of 30 or 40 miles from Karāchi city, chiefly in the hill tracts.

Of the total cultivated area of 1,103 square miles, 380 square miles, or 34 per cent., were irrigated in 1903–4. The chief sources of irrigation are: Government canals, 118 square miles; private canals, 206; and other sources, 56. Throughout Sind nearly every canal is fed by the Indus; and in 1903–4 nearly 34 per cent. of the total irrigated area of the District was supplied by the Pinjari canal, fed by the Shāhbandar embankment of the Indus. The Baghar, a small canal on the right bank, irrigated nearly 43 square miles, the Kotri 24, and the Kokwari 23 square miles. Of the irrigated land, 87 per cent. is sown for the *kharīf* or autumn harvest. There are only twenty-seven wells in the District used for irrigation.

Fisheries, &c.

Sea-fishing is carried on by the Muhāna tribe of Musalmāns, who reside for the most part in hamlets near Karāchi. The principal fish caught on the coast are sharks, rays, and skates. The pearl oyster is found at several places, and the Mīrs conducted pearl operations on their own account. Under British rule, the right has been let for a small sum, but the pearls are very inferior in size and quality, so that the industry has greatly declined during the last twenty-five years. At present practically no pearl fishing is carried on. Considerable fisheries also exist in the river Indus, chiefly for the fish known as *palla*, which are annually leased out by Government for about Rs. 20,000.

The forest lands include tracts in the Jherruck forest division, south of Kotri, producing timber and fuel, with an area of 212 square miles in charge of a divisional forest officer. A portion of the Hyderābād forest division, measuring 48 square miles and situated north of Kotri, also lies within Karāchi District. The forest lands are situated on the banks of the Indus, for the most part in the Shāhbandar *tāluka*. The principal trees are the *babūl* and tamarisk, the latter being found chiefly in the Shāhbandar jungles. Forest receipts in 1903–4 amounted to Rs. 52. Good building stone occurs among the arenaceous limestones of the Gāj group near Karāchi.

Trade and communications.

Local manufactures are confined to cotton cloth, silk scarves, carpets, rugs, and the ordinary metal and earthenware. Besides a few factories in Karāchi city, there are few industries of importance. Tatta is noted for *lungīs*, used by women as robes or shawls. Extensive salt deposits of the purest description occur in the Shāhbandar *tāluka*, on the Sirganda creek, a branch of the Indus, accessible for small craft of from 50 to 60 tons burden. Salt is manufactured from salt water by artificial means at the Maurypur works on the sea-coast, a few miles from Karāchi. Out of 15 factories, 5 are cotton-gins and presses, employing 356 persons, and the rest

include 2 metal foundries, 2 bone-mills, an arsenal, a printing press, and a railway workshop.

The traffic centres mainly in the city and port of KARĀCHI. The staple exports consist of grain, principally wheat, cotton, wool, hides and skins; and the chief imports are sugar, kerosene, piece-goods, liquor, and metals. Karāchi District contains three seaports: namely, Karāchi, KETI, and Sirganda. The average value of the foreign trade, which is practically confined to Karāchi port, for the five years ending 1902–3 was: imports, 505 lakhs; exports, 712 lakhs; total, 1217 lakhs. In 1903–4 the value of the imports was 591 lakhs, and of the exports 1345 lakhs; total, 1936 lakhs, or 719 lakhs above the average of the previous five years. The average value of the coastwise trade for all ports for the five years ending 1902–3 was: imports, 340 lakhs; exports, 251 lakhs; total, 591 lakhs. In 1903–4 the coastwise trade was returned as follows: imports, 375 lakhs; exports, 188 lakhs; total, 563 lakhs, or 28 lakhs below the average of the previous five years, which resulted from a decrease in the exports to Bombay of raw cotton, wheat, and rapeseed. The coast-borne trade includes reimports and re-exports from and to Karāchi, which are included in the values of the foreign trade given above.

Besides being the port of call of various steamer lines, chief among which is the British India Steam Navigation Company, Karāchi is connected with two important railway systems and a number of trade routes from Afghānistān, Kalāt, and Central Asia. The North-Western Railway links the District with the Punjab and the United Provinces, while the Jodhpur-Bīkaner Railway supplies railway communication with the Thar and Pārkar District and, by a circuitous route, with Bombay. A line running for 54 miles from Hyderābād town to Badin, the head-quarters of the Badin *tāluka* of Hyderābād, was opened in 1904. This line is to form part of the proposed direct railway between Sind and Bombay, which will run through Karāchi District and pass either through Cutch or through the Thar and Pārkar District. Three important trade route converge at Karāchi, placing it in direct communication with the interior of Sind, with Las Bela, and with Kalāt. The total length of metalled roads in the District outside the municipal towns is 7 miles, and of unmetalled roads 1,321 miles. The total cost of their maintenance in 1903–4 was Rs. 19,631, of which Rs. 16,700 was paid from Local funds. Avenues of trees are maintained along 185 miles.

The District has three subdivisions, comprising nine *tālukas* and three *mahāls*, in charge of two Assistant Collectors and a Deputy-Collector.

Administration.

The nine *tālukas* are each under a *mukhtiārkār*, corresponding to the *māmlatdār* of the Bombay Presidency proper. The three *mahāls* are Keti Bandar, Mānjhand, and

Kohistān. The city of Karāchi forms a separate charge under the City Deputy-Collector.

The functions of the former District and Sessions Judge are now performed by two Additional Judicial Commissioners, who, together with the Judicial Commissioner, compose the Chief Court in Sind. Subordinate to them are a Judge of the Small Cause Court and a Subordinate Judge, sitting at Kotri. The city is under the separate charge of a City Magistrate, and there is a Cantonment Magistrate for the Karāchi and Manora cantonment. Magisterial work in the District is, as usual, carried on by the administrative staff. Cattle-lifting is a very prevalent form of crime, and, as in other Districts, blood-feuds arising from intrigues with women are common among the hill tribes.

Before the introduction of the present settlement rates into all *tālukas* between 1876–7 and 1889–90, there were only two rates of land revenue levied in the District: that is to say, garden and 'dry-crop' rates, the former at R. 1 and the latter at 8 annas per acre. The present revenue system of Karāchi is adapted to the system of cultivation, depending almost entirely upon irrigation. The irrigation settlement (*see* SIND) is in force in all *tālukas* of the District, and is fixed for a term of ten years. Kohistān is settled under a special lease system, which expires in 1909, but the lease has been extended for another five years. Under this system the landholder is allowed to cultivate on payment of a fixed annual rent, amounting to about 8 annas per acre. Owing to the precarious water-supply of this tract, which is entirely dependent upon the rainfall, the irrigation settlement has not been introduced into Kohistān. The average land revenue rates per acre in the District are: garden land, Rs. 3–9 (maximum Rs. 4, minimum Rs. 2–10); rice land, Rs. 2–14 (maximum Rs. 3–8, minimum Rs. 2–4); and 'dry' land, Rs. 2–0 (maximum Rs 2–8, minimum Rs. 1–4).

Collections on account of land revenue and revenue from all sources have been in thousands of rupees:—

	1880-1.	1890-1.	1900-1	1903-4.
Land revenue . .	7,21	13,05	12,02	8,53
Total revenue . .	22,29	43,01	69 22	60,06

There are five municipalities in the District: namely, KARĀCHI, KOTRI, MĀNJHAND, TATTA, and KETI BANDAR. Elsewhere, local affairs are managed by the District and *tāluka* boards, the total receipts of which in 1903–4 were nearly 1½ lakhs, the principal source of income being the land cess. The expenditure in the same year amounted to one lakh, of which Rs. 30,000 was spent upon roads and buildings.

The District Superintendent of police has two Assistants and seven inspectors. There are nineteen police stations in the District. The total number of police in 1904 was 1,142, of whom 23 were chief constables, 184 head constables, and 935 constables. The District contains a District jail (at Karāchi), 11 sub-jails, and 6 lock-ups. The daily average number of prisoners in 1904 was 254, of whom 2 were females. A new jail with accommodation for 374 prisoners is under construction.

Of the total population, 3·3 per cent. (5·6 males and 0·5 females) are literate. As in other Sind Districts, education is backward as compared with the Presidency proper, and such advance as has been made is more observable in Karāchi city than in the towns and villages in the interior. The least backward *tālukas* are Kotri and Tatta. In 1880–1 there were 65 schools, attended by 4,581 pupils. The number of pupils rose to 13,856 in 1891 and to 16,602 in 1901. In 1903–4 there were 297 educational institutions, public and private, including an Arts college at Karāchi city, 6 high schools, 8 middle schools, 2 training schools, 2 special schools, and 186 primary and elementary. These institutions were attended by 13,605 pupils, including 3,028 girls. Of the 205 institutions classed as public, 2 were managed by Government, 69 by the local boards and municipalities, while 134 were aided. The great majority of the pupils are in primary schools. Attempts have recently been made by the Muhammadan community to encourage education, and a society has been formed to promote this object. The total expenditure on education in 1903–4 was 2½ lakhs, of which about Rs. 50,000 was derived from fees. Of the total, 55 per cent. was devoted to primary education.

The District has 2 hospitals and 13 dispensaries and other institutions, containing accommodation for 186 in-patients. The existing civil hospital at Karāchi is being replaced by a more modern building. In these institutions, 104,000 cases were treated in 1904, of whom 1,928 were in-patients, and 3,473 operations were performed. The expenditure was Rs. 64,000, of which Rs. 30,000 was met from Local and municipal funds.

The number of persons successfully vaccinated in 1903–4 was 12,359, representing a proportion of 27 per 1,000, which exceeds the average for the Presidency. Vaccination is compulsory only in Karāchi city.

[A. W. Hughes, *Gazetteer of the Province of Sind* (1876, new edition in the press).]

Karāchi Tāluka.—South-western *tāluka* of Karāchi District, Sind, Bombay, lying between 24° 46′ and 25° 39′ N. and 66° 42′ and 67° 53′ E., with an area of 1,678 square miles. It contains one city, KARĀCHI (population, 116,663), the head-quarters of the District and of the *tāluka*; and 14 villages. The population increased from 124,274 in 1891 to 136,297 in 1901. The density is 81 persons per square mile. The

land revenue and cesses in 1903-4 amounted to Rs. 32,010. The aspect of the *tāluka*, excepting the portion bordering on the sea, is hilly, especially towards the north and west where ranges of lofty and barren hills run from north to south, with wide valleys between them. A small chain of hills runs within the *tāluka* for some miles parallel to the Hab river, terminating in the headland of Ras Muār or Cape Monze, a landmark for sailors making the port of Karāchi. After a heavy fall of rain these hills afford abundant pasturage. The *tāluka* contains no canals, but is drained by several mountain torrents, the chief of which are the Malīr and Layāri. Salt marshes occur along the sea-coast, and abound with mangroves and other trees. Much of the fertile portion of the *tāluka* is devoted to raising vegetables and fruit for the Karāchi market. Agriculture depends chiefly upon wells and springs, the principal crops being *jowār*, *bājra*, barley, and sugar-cane, which are chiefly grown at Malīr.

Karāchi City.—Capital of Sind, Bombay, and head-quarters of the District and *tāluka* of the same name, situated in 24° 51′ N. and 67° 4′ E., at the extreme northern end of the Indus delta, near the southern base of the Pab mountains and close to the border of Baluchistān. It is 993 miles distant from Bombay by rail, the distance in nautical miles being 483. Two routes connect the city with Lahore, by Sukkur, and by the Kotri-Rohri railway, the distance by each being about 800 miles. Population has increased rapidly: (1872) 56,753, (1881) 73,560, (1891) 105,199, and (1901) 116,663, of whom 8,019 resided in the cantonment. Muhammadans number 60,003, Hindus 48,169, Christians 6,158, and Pārsīs 1,823.

Population.

The bay of Karāchi is formed by the projecting point of Manora Head, the extremity of a reef 10 miles in length, which supplies a natural barrier against the Arabian Sea. The opening of the bay between Manora and the opposite sanitarium of Clifton has a width of about 3½ miles; but the mouth is blocked by a group of rocky islets, known as the Oyster Rocks, as well as by what was formerly the larger island of Kiamāri, now part of the mainland owing to the action of sand-drifts. The harbour stretches for 5 miles northward from Manora Head to the narrows of the Layāri river, and about the same distance from the old town of Karāchi on the eastern shore to the extreme western point. Only a small portion of this extensive area, however, is capable of accommodating large vessels. Manora Head, the first object visible to a voyager approaching Karāchi from the sea, is crowned by a lighthouse, having a fixed light 148 feet above sea-level, and visible for 20 miles around in clear weather. The point was formerly guarded by a fort, said to have been first erected in 1797; but this has now yielded place to a modern fortification, the port and pilot establishment, the buildings in

Description.

connexion with the harbour improvements, and a portion of the Indo-European Telegraph department. Besides a library, billiard-room, and European school, Manora possesses an English church, intended for the crews of vessels frequenting the harbour. It has recently been made a cantonment, and is shortly to be constituted a military sanitarium in place of Ghizri, lately abandoned.

On the opposite side of the mouth, Kiamāri forms the landing-place for all passengers and goods bound for Karāchi, and has three piers. A road running along the Napier Mole, three miles long, connects the island with the city and mainland, and is traversed by the East India Tramway. The North-Western Railway also extends to Kiamāri; but instead of following the mole, it takes a more circuitous route, to the south, by the edge of a large lagoon, the waters of which are passed through the mole by a screw-pile bridge, 1,200 feet in length, erected in 1865 at a cost of about 5 lakhs, so as to allow them to flow uninterruptedly into the harbour as a means of scouring the channel. At the northern extremity of this bridge, and running in a westerly direction, stands the native jetty, built of stone at an expense of 4½ lakhs. At the end of the mole, on the mainland side, the custom-house runs right across the road, which pierces it by five arches, thus intercepting all traffic.

Two principal thoroughfares lead from the custom-house to the Karāchi cantonment, known respectively as the Bandar and the McLeod Roads, at the junction of which stands a handsome clock-tower, the public memorial to Sir William Merewether. The oldest portion of the town is situated along the former route, close to the harbour, containing the most thickly populated quarter in Karāchi. The municipality has widened and paved the streets, and effected other improvements which must conduce to the health of the inhabitants, who are chiefly Hindu and Muhammadan merchants. The Layāri, a river merely in name, as it contains water only three or four times a year, separates this quarter from the Layāri suburb. On the McLeod Road are situated the Chief Court, the Bank of Bombay, the National Bank of India, the city railway station, the general post office, the telegraph office, the Mansfield import yard, Messrs. Herman & Co.'s ironworks, and three important cotton-presses—the McLeod Road presses, owned by the Sind Press Company, capable of turning out daily 350 pressed bales of cotton; the Tyābjī presses, erected in 1865 at a cost of 2½ lakhs, and turning out 250 bales; and the Albert Presses, leased to the Sind Press Company, and turning out 390 bales. This quarter also contains the Edaljī Dinsha dispensary, several schools, the Sind College, a new Hindu temple, and most of the offices belonging to European merchants. The Afghān *sarai*, intended for the use of caravans from Kandahār, and rebuilt by the municipality

in 1873 at a cost of Rs. 20,000, covers an area of about 3 acres. Nearer to the cantonment, a number of bungalows stand on the intervening space, while the civil lines skirt the cantonment itself to the eastward. The military quarter, which is situated to the north and east of the city proper, consists of three portions: the dépôt lines, the artillery lines, and the European infantry lines. The dépôt lines are the oldest military portion of Karāchi, and were originally intended to supply accommodation to troops passing up-country from the sea or vice versa. Here also is the arsenal. The public garden, distant about half a mile from cantonments, covers an area of 40 acres, neatly laid out with trees and shrubs, and contains an excellent zoological collection.

The architecture of Karāchi is essentially modern and Anglo-Indian. The Anglican Church of the Holy Trinity is situated just outside the cantonments. It stands in a large open space, 15 acres in extent, and consists of a heavy, ungainly Italian nave, with an ugly tower, the upper portion of which has recently been removed as unsafe. St. Patrick's Roman Catholic school, formerly a church, is a fine stone building, capable of accommodating 40 boarders and 200 day-scholars. The European and Indo-European school, known as the Karāchi Grammar School, founded in 1854, under the auspices of Sir Bartle Frere, then Commissioner of Sind, occupies a handsome stone structure in the dépôt lines. The other chief modern institutions include a Muhammadan college, the Presbyterian Church of St. Andrew, Christ Church and the Anglican Mission schools, the Napier Barracks, the Sind Club, the Empress market, the Pārsī Vīrbaiji school, and the post office. The Frere Hall, a municipal building, stands near the Sind Club. It was opened in a somewhat unfinished state in October, 1865, up to which date $1\frac{3}{4}$ lakhs had been expended upon its erection. This hall, which is a comparatively good specimen of slightly adapted Venetian Gothic, contains the Karāchi general library. A fine statue of the Queen-Empress Victoria, erected by public subscription in the grounds of Frere Hall, was unveiled by His Royal Highness the Prince of Wales in March, 1906. Government House, the residence of the Commissioner of Sind, is situated in the civil quarter, and consists of a central building with two wings, approached by five separate carriage drives. Though commodious and comfortable in its interior arrangements, the exterior can lay no claim to architectural beauty. It was originally built by Sir Charles Napier when governor of the province, and has now been improved and fitted with an electric light and fan installation.

The climate of Karachi, owing to the prevalence of sea-breezes during eight months of the year, is more healthy than any other in Sind. The low situation of the city, and the near neighbourhood of marsh land, render the atmosphere moist and warm; but the heat

during the hottest months cannot compare with that experienced in the interior. The mean annual temperature, calculated from data for twenty-five years ending 1901, may be stated at 65° in January, 85° in May, and 75° in November. The hottest weather occurs in April, May, and June, though September and October are also often close and sultry. The annual rainfall averages about 5 inches. The first case of plague occurred early in December of 1896, the locality attacked being the old town quarter, and nearly 3,400 persons died in the first year. The total mortality from plague until the end of March, 1904, was 19,010.

History.

Karāchi came into British possession in 1843. The town may be regarded as almost a creation of British rule, its extensive commerce, splendid harbour works, and numerous flourishing institutions having all sprung up since the introduction of settled administration. Before 1725 no town whatever appears to have existed on the site; but a place named Kharak, with a considerable commerce, is mentioned as lying on the other side of the Hab river at the confluence of the river and the sea. The entrance to Kharak harbour having become blocked with sand, a migration was made to a spot near the present head of Karāchi harbour, and at that time (1729) called Kalāchi Kun; and in time, under Jām Daria Khān Jokia, trade began to centre upon the convenient harbour. Cannon brought from Muscat protected the little fort, and the name of Karāchi, supposed to be a corrupt form of Kalāchi, was bestowed upon the rising village. The hopeless blocking up of Shāhbandar harbour shortly afterwards drove much of its former trade and population to Karāchi.

Under the Kalhora princes, the Khān of Kalāt obtained a grant of the town, which he garrisoned from his own territory. Within the short period 1792–5, three Baloch armies appeared before the town; but only on the third occasion did the Tālpur chief of Hyderābād, who led the Baloch troops, gain possession by force of arms. A fort was built at Manora, at the mouth of the harbour. The Tālpur chiefs made considerable efforts to increase the trade of Karāchi, so that in 1838 the town and suburbs had a population of 14,000, half of whom were Hindus. The houses were all flat-roofed, and built of mud, very few of them having more than one storey: each house had its *bādgīr* or wind-catcher for the purposes of ventilation. The government under the Mīrs was vested in a civil and military official, the Nawāb, who ruled despotically over the town and neighbourhood.

Commerce.

Even before the period of British rule, the commerce of Karāchi had attained to some importance, owing to the value of the river Indus as a channel of communication. Nevertheless, the sparse population of the country, combined with the short-sighted policy of its rulers, prevented it from reaching its proper develop-

ment. Under the Tālpur Mīrs, all imports were subjected to a 4 per cent. and all exports to a 2½ per cent. duty. In 1809 the customs revenue amounted to Rs. 99,000; by 1837 it had risen to Rs. 1,74,000. In the latter year the whole trade of the port was valued at about 40 lakhs, the following being the principal items: imports—English silk, broadcloth, chintz, &c., Bengal and China raw silk, slaves, dates, sugar, ivory, copper, spices, and cotton; exports—opium, *ghī*, indigo, wheat, madder, wool, raisins, and salted fish. Slaves came chiefly from Muscat, and consisted of negroes or Abyssinians. Opium to the extent of 500 camel-loads came from Mārwār, and was exported to the Portuguese town of Damān. Almost all the goods imported into Sind were then consumed within the province, only Rs. 1,50,000 worth being sent across the frontier.

In 1843-4, the first year of British rule, the trade of Karāchi, including Keti and Sirganda, had a total value of about 12 lakhs, due to a decline in the opium trade, which had steadily fallen since 1837, when its value was estimated at 16 lakhs. The second year of British rule saw a rise to 23, the third to 35, and the fifth to 44 lakhs. By 1852-3 the total value had risen to 81 lakhs. In 1857-8 the exports nearly overtook the imports, the two standing respectively at 107 and 108 lakhs. The American Civil War gave an enormous impetus to the trade of Karāchi, by the high demand for Indian cotton which it created in European markets; and in 1863-4 the total value of the trade amounted to no less than 6 crores: namely, imports 2 and exports 4 crores. The restoration of peace in America, however, brought about a lower price for cotton in Lancashire, and the trade of Karāchi gradually returned to what was then considered its normal level. The total value sank to 4 crores in 1867-8, and 3½ crores in 1873-4; but by 1882-3 it had risen again to 7 crores, and in 1892-3 to 11 crores.

In 1903-4 the trade of Karāchi port, exclusive of Government stores and treasure, had increased in value to 24·9 crores (of which 5·5 represented coasting trade): namely, imports 9·6 crores, and exports 15·2 crores. The main cause of the growth is due to the annually increasing exports of wheat and other food-grains, and oilseeds, which are brought by rail from irrigated tracts of Sind and the Punjab. The following were the chief articles of foreign import, with their values, in 1903-4: apparel, 14 lakhs; cotton piece-goods, 2 crores; cotton twist and yarn, 10 lakhs; manufactures of wool, 20 lakhs; hardware and cutlery, 13 lakhs; wines and liqueurs, 9 lakhs; spirits, 11 lakhs; metals, wrought and unwrought (chiefly copper, iron, and steel), 43 lakhs; provisions, 19 lakhs; sugar, 102 lakhs; machinery and mill-work, 10 lakhs; mineral oil, 22 lakhs; and treasure, 44 lakhs. Total imports from foreign ports (including treasure), 5·9 crores.

From the United Kingdom Karāchi imports cotton manufactures,

railway materials, liquors, coal and coke, machinery, metals, provisions, apparel, drugs, and medicines; from Bombay, cotton piece-goods and twist, treasure, metals, silk, sugar, tea, jute, spices, dyes, woollen manufactures, coco-nuts, manufactured silk, liquors, fruit, and vegetables; from the Persian Gulf, dried fruits, treasure, wool, grain, and horses; from the coast of Makrān, wool, provisions, grain, and pulses; from Calcutta, jute, grain, and pulses; and from Russia, mineral oil.

The following list shows the value of the exports to foreign ports in 1903-4: raw cotton, $2\frac{3}{4}$ crores; grain and pulses, $7\frac{3}{4}$ crores, of which $7\frac{1}{2}$ crores represented wheat; hides and skins, 47 lakhs; oilseeds, chiefly rape and *til*, one crore; raw wool, $52\frac{1}{4}$ lakhs; bones, 17 lakhs. Total value of exports (including treasure), $13\frac{1}{2}$ crores.

To the United Kingdom Karāchi exports cotton, wool, wheat, seeds, skins, and bones; to France, wheat, cotton, bones, hides, gram, gingelly, and rapeseed; to Germany, wheat, cotton, hides, bones, and seeds; to Japan, cotton; to Russia, indigo and cotton; to Bombay, Cutch, and Gujarāt, cotton, grain, indigo, seeds, skins, fish-maws and shark-fins; to Mauritius, grain and pulses; to Persia, rice; to Madras, rice and skins; and to China, raw cotton.

The inland trade of Karāchi includes wheat from the Punjab and the United Provinces, cotton from the Punjab, a large quantity of wool, dried fruits, and horses from Kandahār and Kalāt; while camels, bullocks, and donkeys bring in firewood, grass, *ghī*, palm-leaves, hides, &c., from Las Bela and Kohistān.

The harbour of Karāchi during the period of the Tālpur Mīrs, and for the first few years after British annexation, was capable of accommodating only small native craft. Steamers and large ships anchored outside Manora Point, whence men and stores were conveyed in boats up the river, as far as the tide permitted, and then transferred into canoes, which carried them through a sea of liquid mud to a spot near the site of the existing custom-house. In process of time, however, it became apparent that the bar did not interpose so great an obstacle as was originally supposed, and that square-rigged vessels of a certain draught could cross it with safety. In 1854, under the Commissionership of Sir Bartle Frere, the Napier Mole road or causeway, connecting Karāchi with the island of Kiamāri, was completed, which offered additional inducements to ships for visiting the harbour.

In 1856 a scheme for improving the harbour by deepening the water on the bar was submitted for the opinion of Mr. James Walker, an eminent London engineer, who estimated the cost of works to provide an ample width of passage, with a depth of 25 feet at neap tides, at 29 lakhs. After much debate and intermissions, owing to partial failures, the principal part of the works—the Manora breakwater, 1,503 feet in length—was commenced in 1869, and completed in 1873 at

a cost of 7 lakhs. It affords complete shelter to the entrance channel (eastern) over the bar during the south-west monsoon, and, combined with other works, has already led to the deepening at the entrance to 20 feet at low-water spring tides. The rise and fall is about 8 feet. Further progress was ensured by the creation in 1880 of a Harbour Board, for the purpose of levying shipping dues, which eventually was transformed into the Port Trust by Act VI of 1886. Among the works carried out by the board are the Kiamāri and East Channel groynes or stone banks, which direct and confine into one channel the tidal flow; extensive dredging, boring, and submarine blasting operations; the Merewether Pier, opened in 1882, to accommodate one steamer and provide facilities for trooping: the Erskine wharf, 2,000 feet long, and the James wharf, 1,900 feet long, which can together accommodate ten large steamers and are linked for cargo purposes with the North-Western Railway by a commodious railway yard; a special pier for oil-steamers, to serve the four bulk-oil installations at Kiamāri; and the Mansfield import yard, with warehouse accommodation for all goods landed at the wharves. In the harbour entrance, within shelter of the breakwater, there is a minimum depth of 24½ feet of water, which is maintained and will eventually be improved by dredging during the fair season. Further developments are under consideration, while the reclamation of a large area and the construction of two new steamer berths, with a minimum depth of 28 feet, are now being carried out.

In 1847-8 the number of vessels which entered the harbour was 891, all native craft, with a total burden of 30,509 tons. In 1903-4, 384 vessels (of which 174 were steam-vessels) entered Karāchi harbour with cargoes from foreign ports: gross tonnage, 301,109 tons. In the same year 515 vessels (of which 344 were steam-vessels) cleared with cargoes for foreign ports; gross tonnage, 720,919 tons. From the ports on the coasts of India and Burma 1,311 vessels entered Karāchi laden with cargoes; tonnage, 567,436 tons. For the ports on the coasts of India and Burma 1,177 vessels left Karāchi laden with cargoes; tonnage, 392,463 tons. The affairs of the port are managed by the Karāchi Port Trust, the income of which in 1903-4 was about 19 lakhs and the expenditure 13 lakhs. During the three years ending 1904-5, the average income expanded to more than 21 lakhs and the expenditure to 15½ lakhs. The surplus is devoted to paying off the debt of 66 lakhs, which has now been reduced to 58½ lakhs. The principal steamship lines are the Ellerman, Wilson, Strick, Hansa, Austrian Lloyd, British India, and Bombay Steam Navigation Company.

The Karāchi municipality was established in 1852, and had an income during the decade ending 1901 of about 12 lakhs. In 1903-4 the income was 15 lakhs and the expenditure 14 lakhs. The chief heads of municipal revenue are: octroi (10 lakhs, excluding refunds of

6 lakhs), tax on houses and lands (Rs. 53,000), and rents (Rs. 27,000); and the chief items of expenditure are administration and collection charges (7 lakhs), water-supply and drainage (Rs. 62,000), conservancy (Rs. 1,50,000), hospital and dispensary (Rs. 15,000), public works (Rs. 1,63,000), and education (Rs. 49,000). The management of the cantonment is in the hands of a committee, which had an income and expenditure of about Rs. 18,500 in 1903–4. The normal strength of the Karāchi garrison is 1,300, and of the volunteer forces 800.

The difficulty of water-supply long formed one of the chief drawbacks to Karāchi, most of the wells being too brackish for drinking purposes. Formerly the supply was mainly derived from wells tapping a subterranean bed of the Layāri. The inhabitants of Kiamāri, and the shipping in the harbour, obtained water from carts, which brought it up from 'camp[1].' For the purposes of ice manufacture, water was formerly imported by rail from Kotri. A scheme for constructing an underground aqueduct, 18 miles in length, from the Malir river at a cost of 5 lakhs was completed in 1882, and Karāchi is now in possession of a pure water-supply. The capital outlay on this undertaking, including pipes for distributing the water to the city, Kiamāri, and the cantonment, amounted to 17 lakhs; and the annual charges are 3 lakhs, of which Rs. 32,600 represents maintenance charges.

Education.

Education is carried on by the Sind College, the Government high school, Anglo-vernacular schools, the Government vernacular school, and several female and other minor establishments. The total number of boys' schools is 48, with a daily attendance of 6,239, and of girls' schools 20, with an attendance of 1,861. The Dayārām Jethmal Sind Arts College was established in 1887. It is attended by 120 scholars, some of whom are accommodated in a hostel attached to it. A law class prepares students for the first LL.B. The Nārāyan Jagannāth high school prepares students for the matriculation and school final examination. It is managed by Government, and Rs. 10,000 is annually contributed from Provincial revenues. Among the special schools may be mentioned the Muhammadan high school (*Madrasat-ul-Islām*), the normal class for the training of mistresses, and the engineering class. Newspapers or periodicals published at Karāchi include four English (the *Sind Gazette*, the *Sind Times*, the *Phoenix*, and the *Karāchi Chronicle*) and four native (in Sindī, Gujarātī, and Persian).

Medical.

The city possesses a civil hospital, a Dufferin hospital for females, and four dispensaries. These institutions afforded relief in 1904 to 70,155 persons, of whom 1,543 were in-patients treated in the civil hospital. The Dufferin hospital,

[1] The portion of Karāchi comprising the Sadr bazar, civil lines, &c., is locally known as 'camp,' as opposed to the old town proper and Kiamāri.

built by Mr. Edaljī Dinsha in 1901, treated 10,017 patients in 1904, of whom 206 were in-patients. A sick hospital, now called the military hospital, was established in 1869, in connexion with the cantonment, and in 1901 the cantonment hospital was opened in the Preedy quarter of the city. Adjacent to the barracks is a third hospital, known as the followers' hospital, where camp servants are treated.

[A. F. Baillie, *Kurrachee, Past, Present and Future* (1890); *Official Compendium of Military Information regarding Karāchi* (Bombay, 1896); *Karāchi Harbour Works* (Bombay, 1867); *An Account of the Port of Karāchi* (Karāchi, 1892).]

Karād Tāluka.—*Tāluka* of Sātāra District, Bombay, lying between 17° 5′ and 17° 30′ N. and 74° and 74′ 18′ E., with an area of 378 square miles. There is one town, KARĀD (population, 11,499), the head-quarters; and 98 villages, including KALE (5,077). The population in 1901 was 134,947, compared with 154,383 in 1891. The density, 357 persons per square mile, is much above the District average. The demand for land revenue in 1903–4 was 2·9 lakhs, and for cesses Rs. 24,000. The *tāluka* is a portion of the valley of the Kistna river, which runs 30 miles from north to south between two parallel chains of hills. The western chain is broken half-way by the Koyna, which joins the Kistna at Karād. The land is generally flat and open, but becomes rougher as it rises towards the hills. Gardens and groves and several charming river reaches lend a picturesque appearance to the country. The soil is extremely fertile. In the cold season the days are warm and the nights bitterly cold, and in the hot season Karād is one of the hottest parts of the District. The annual rainfall averages 30 inches.

Karād Town (*Karhād*, originally *Karahākada*).—Head-quarters of the *tāluka* of the same name in Sātāra District, Bombay, situated in 17° 17′ N. and 74° 11′ E., at the confluence of the Koyna and Kistna, on the Bombay-Madras high road, 31 miles south-south-east of Sātāra town, and about 4 miles south-west of Karād Road on the Southern Mahratta Railway. Population (1901), 11,499. The town was constituted a municipality in 1885. During the decade ending 1901 the income averaged Rs. 10,500. In 1903–4 the income was Rs. 12,000. It is referred to in ancient writings as Karahākada, and has given its name to a subdivision of Brāhmans. In the north-east is an old mud fort containing the mansion of the Pant Pratinidhi, the most noteworthy objects in which are an audience-hall with an ornamental ceiling of teak and iron, built about 1800, and a curious step-well. The mosque of Karād is interesting, as it contains nine Arabic inscriptions. One of these shows that it was built during the reign of the fifth Bijāpur king, Alī Adil Shāh (1557–79), by one Ibrāhim Khān. About 3 miles to the south-west is a group of 54 Buddhist caves of

a very plain and early type. The town contains a Subordinate Judge's court, a dispensary, and an English school.

Karadge.– Village in the Chikodi *tāluka* of Belgaum District, Bombay, situated in 16° 33′ N. and 74° 30′ E. Population (1901), 5,138. The village, which is purely agricultural, contains a boys' school with 66 pupils.

Kārāgola.—Village in the head-quarters subdivision of Purnea District, Bengal, situated in 25° 24′ N. and 87° 28′ E., on the left bank of the Ganges. Kārāgola is on the old route from Calcutta to Darjeeling, and is a place of call of the Ganges Dispatch Service, though the steamer now touches 2 miles below the village. The fair held here was formerly one of the largest in Bengal, but has recently lost much of its importance. It takes place at the time of the full moon in the month of Māgh (about February); and a brisk trade is carried on in nuts and spices, as well as in tents, carpets, and wooden furniture imported from Monghyr.

Karala.—Village in the Gwalior Gird district of Gwalior State, Central India, situated in 25° 54′ N. and 78° 1′ E. Population (1901), 4,989. The place is held by a family of Ponwār Thākurs on a quit-rent. It is said to have been founded in 1564, but nothing is known of its early history. In 1852 it fell to Sindhia, and until 1868 was in a prosperous condition. It afterwards, however, became notorious for the depredations committed by the Ponwārs, their excesses reaching such a pitch as to necessitate the forcible depopulation of the place in 1893. It has since then been slowly recovering its position.

Kāraikkudi.—Town in the Tiruppattūr *tahsīl* of the Sivaganga estate, Madura District, Madras, situated in 10° 4′ N. and 78° 47′ E. The population has rapidly increased, and numbered 11,801 in 1901, compared with 6,579 in 1891. The town is chiefly noted as one of the centres of the Nāttukottai Chettis, an enterprising class of merchants and money-lenders; and the many handsome residences which these people have constructed within it have added greatly to its appearance.

Karajgaon.—Town in Amraotī District, Berār. *See* KARASGAON.

Karajgi.– Eastern *tāluka* of Dhārwār District, Bombay, lying between 14° 44′ and 15° 5′ N. and 75° 17′ and 75° 44′ E., with an area of 441 square miles. It contains one town, HĀVERI (population 7,974), the head-quarters; and 127 villages. The population in 1901 was 104,342, compared with 90,206 in 1891. The density, 237 persons per square mile, is slightly below the District average. The demand for land revenue in 1903–4 was 2.09 lakhs, and for cesses Rs. 16,000. Except in the south-west, where it is broken by hills, the country is flat. It is crossed from east to west by the Varadā, a tributary of the Tungabhadra In the north and east the soil is black and in the

south and west mostly red, with an occasional plot of black. The plain of Karajgi is broken at Deogiri, Kanvali, and Kabur by short ranges of hills. The annual rainfall averages 30 inches.

Karākat.—*Tahsīl* in Jaunpur District, United Provinces. *See* KIRĀKAT.

Karamnāsā (*Karamnāshā*, 'the destroyer of religious merit'; the *Kommenases* of Arrian).—River of Northern India, rising near Sārodāg in the Kaimur Hills (24° 32′ N., 83° 26′ E.), 18 miles west of Rohtāsgarh in Bengal. It first flows north-west, and near Darihārā begins to form the boundary between the Districts of Shāhābād (Bengal) and Mirzāpur (United Provinces). It then flows north for about 15 miles across Mirzāpur, after which it turns north-east and separates Shāhābād from Benares and Ghāzīpur, until it falls into the GANGES near Chausā, after a total course of about 146 miles. Its tributaries are the Durgautī and Dharmautī, two small streams on the right bank. In the hills, the bed of the Karamnāsā is rocky and its banks abrupt; but as it debouches upon the plains, it sinks deeply into a rich clay, very retentive of moisture. During the rains small boats can ply as high as the confluence of the Durgautī. There are two falls, called Deo Dharī and Chhanpathar, which attract attention from their height and beauty.

Two legends account for the ill repute of the river. One tells how Rājā Trisanka of the Solar race had killed a Brāhman and contracted an incestuous marriage. He was purged from these sins by a saint who collected water from all the sacred streams of the world and washed him. The bath took place at the spot where the river issues, and this bears for ever the taint of his guilt. The other legend makes Trisanka attempt to ascend into heaven by means of long austerities. Half-way he was suspended head downwards by the gods, and a poisonous moisture exudes from his mouth into the river. The real cause of its ill fame is probably the fact that the Karamnāsā was the boundary of the eastern kingdom of Magadha, which is treated with contempt in Sanskrit literature because its inhabitants were not Aryans. Hindus living on its banks, except those of the highest castes, are not defiled by it, and carry more scrupulous travellers over it for a consideration. There is no regular irrigation from the Karamnāsā.

Karamsad.—*Pātīdār* village in the Anand *tāluka* of Kaira District, Bombay, situated in 22° 33′ N. and 72° 54′ E., and one of the thirteen *kulīn* villages of the District. Population (1901), 5,105. It contains a middle school with 38 pupils.

Kārāmūngi.—Crown *tāluk* in Bīdar District, Hyderābād State. The population in 1901, including *jāgīrs*, was 51,808, and the area was 362 square miles. In 1891 the population had been 60,341, the decrease being due to the famine of 1899–1900. The *tāluk* contains 130 villages, of which 19 are *jāgīr*; and Janwāda (population, 2,165)

is the head-quarters. Since 1905 the *tāluk* has included the old *tāluk* of Aurād, which had an area of 189 square miles, a population of 19,301, and 65 villages in 1901. The land revenue in 1901 was 1·7 lakhs. The Mānjra river flows through the *tāluk*. The *paigāh tāluk* of Nārāyankher (population, 42,972) lies south of this *tāluk*, and consists of 106 villages. Farther south again is the *paigāh tāluk* of Hasanābād (population, 21,563), with 45 villages.

Karangarh.—Hill, or more properly plateau, in the head-quarters subdivision of Bhāgalpur District, Bengal, situated in 25° 15′ N. and 86° 56′ E., near Bhāgalpur town, and said to derive its name from Karna, a pious Hindu king. The plateau, which is locally known as the *kila* or fort, is believed to be the site of one of the famous pre-Buddhist forts in Bengal; the lines of several bastions and the ditch in the west can still be traced. In more modern times it contained the lines of the Hill Rangers, a body of troops raised in 1780 from among the hill people by Augustus Clevland, Collector of the District, for the pacification of the lawless jungle tribes. The corps was disbanded in 1863 on the reorganization of the Native army. The only objects of interest are Saiva temples of some celebrity. These consist of four buildings (*maths*), with square bases and the usual pointed pinnacles. One is several hundred years old, the others being modern. Numbers of Hindus, though not usually worshippers of Siva, pay their devotions here on the last day of the month of Kārtik. The temples contain several of the so-called seats of Mahādeo or Siva, one of which is made of stone from the Narbadā. There are also two monuments erected to the memory of Clevland one by Government, and the other by the landholders of the District. The Bidyāsāgar Memorial Sanskrit *tol* occupies a fine building in the fort compound.

Karanja.—Peninsula, village, and petty division (*petha*) in the Panvel *tāluka* of Kolāba District, Bombay, situated in 18° 51′ N. and 72° 57′ E., in the south-east of Bombay harbour, and about 6 miles south-east of the Carnac Bandar of Bombay. On a clear day the peninsula can be distinguished plainly, and apparently but a mile or two distant, from Bombay. It is 8 miles long and 4 broad. The peninsula consists of two rocky hills, between which stretch grass and rice lands, wooded with mango-trees and palms. The creek to the east is broken up into several salt-pans, the officers connected with which are stationed at the town of URAN close by Besides its rice crop, which is of considerable value, the two special exports of Karanja Island are salt and liquor made from the *mahuā* or from the date-palm. The chief industry of the people, however, is fishing. The great area of the salt-works, about 3,000 acres, the shining white pans, regular boundaries, and heaps of glistening salt, produce a curious effect to the eye. The salt pans are not of recent date; reference

is made to them in 1638, and in 1820 they are noted as having produced 20,000 tons of salt. During the year 1903–4 the salt export was about 2,000,000 maunds, and the revenue therefrom 29 lakhs. There are 19 distilleries at Mora on the island of Uran, all owned by Pārsīs. The *mahuā* flowers distilled in these are brought through Bombay from the Pānch Mahāls, and the annual revenue is about 35 lakhs. The water-supply is good, being derived from reservoirs, and from many ponds and wells which hold water for several months after the rains.

Karanja has passed under every form of rule and suffered every species of vicissitude. Under the Silāhāras, in the twelfth century, the island was prosperous, with many villages and gardens. It formed part of Bassein province, under the Portuguese, from 1530 to 1740: was fortified with two strongholds, one at Uran, the other on the top of its southern peak; and 100 armed men were maintained as garrison. At the present day may still be seen the ruins of Portuguese hermitages and churches. In 1535 the island was in charge of the Franciscans. In 1613 it was the scene of a great riot. In 1670 it was plundered by a Marāthā freebooter. In 1737 the Marāthās finally occupied the place, and held it until 1774, when the English took possession.

The most noteworthy ruins are on the summit of Dronagiri, the southern of the two hill peaks, including the Portuguese fort, guard-house, church, rock-temple, and reservoir. On the east face of Kharavli (the north hill peak) is a Buddhist rock cut chapel; at Uran town, the old Portuguese fort and churches; in the village of Sheva, a ruined church, of which the broken walls of the graveyard are the only trace.

Kāranja.—Town in the Murtazāpur *tāluk* of Akola District, Berār, situated in 20° 29′ N. and 77° 32′ E. Population (1901), 16,535. Kāranja is a place of some commercial importance. It is said to take its name from a Hindu saint, Karinj Rishi, who, being afflicted with a grievous disease, invoked the aid of the goddess Ambā. She created for him a tank, still existing opposite the temple of the goddess, in which he bathed and became clean. The town is surrounded by an old wall, now dilapidated. It is known as Kāranja Bībī, owing, it is said, to its having once formed part of the dowry of Daulat Shāh Begam (*see* BADNERA). The municipality was created in 1895. The receipts and expenditure during the ten years ending 1900–1 averaged Rs. 14,000 and Rs. 13,500. In 1903–4 the income was Rs. 18,000, mainly derived from taxes and cesses: and the expenditure was Rs. 15,000, chiefly devoted to conservancy and education Kāranja is connected with Murtazāpur (20 miles) by a metalled road.

Karanjiā.—Village in Mayūrbhanj, one of the Orissa Tributary States, Bengal, situated in 21° 44′ N. and 86° 6′ E. Population (1901), 732. Karanjiā is the head-quarters of the Pānchpīr sub-

division of the State, and is connected with Baripādā, the capital, by a metalled road.

Karasgaon.—Town in the Ellichpur *tāluk* of Amraotī District, Berār, situated in 21° 20′ N. and 77° 39′ E. Population (1901), 7,456. A fort of fine sandstone, now in ruins, was built here by Vithal Bhāg Deo, a *tālukdār* in the Ellichpur *jāgīr* in 1806.

Karatoyā.—Old river of Eastern Bengal and Assam, which rises in the Baikuntpur jungle in the extreme north-west of Jalpaigurī District in 26° 51′ N. and 88° 28′ E., and meanders through Rangpur, until, after a course of 214 miles, it joins the Halhāliā, in the south of Bogra District, in 24° 38′ N. and 89° 29′ E. The united stream is known as the PHULJHUR, and it eventually finds its way into the JAMUNA (3). The Karatoyā bore in ancient times, as we learn from the Purānas, a high character for sanctity; and its mermaid goddess, whose image has been found among the ruins of MAHĀSTHĀN, was widely worshipped, and this place is even now a favourite place of pilgrimage. The river is mentioned in the *Jogini Tantra* as the western boundary of the ancient kingdom of Kāmarūpa, which it separated from Pundra or Paundravardhana, the country of the Pods, whose capital was at Mahāsthān. It was along its right bank that Muhammad-i-Bakhtyār Khiljī, the Muhammadan conqueror of Bengal, marched upon his ill-fated invasion of Tibet in 1205; and in the narrative of that expedition the Karatoyā is described as being three times the width of the Ganges. It was no doubt the great river crossed by Hiuen Tsiang on his way to Kāmarūpa in the seventh century, and by Alā-ud-dīn Husain on his invasion of the same country in 1498.

The topography of the river is attended with numerous difficulties; changes of name are frequent, and its most recent bed, which ultimately joins the Atrai some 30 miles east of Pābna, is known indifferently as the Burhī ('old') Tīsta and the Karto or Karatoyā. It appears that at the end of the eighteenth century, when the GANGES and the BRAHMAPUTRA were still 150 miles apart, the TĪSTA united with the other Himālayan streams to form one great river. The elevated tract of stiff clay known as the BĀRIND, which spreads over a considerable part of the modern Districts of Rājshāhi, Dinājpur, Mālda, and Bogra, formed an obstacle which could not be so easily pierced as the more recent alluvium round it, and the outlet of the Himālayan streams was thus diverted to one side or the other. Sometimes when the trend of the rivers was eastwards, they flowed down the channel of the Karatoya, which is shown in Van Den Broucke's map of Bengal (*circa* 1660) as flowing into the Ganges, and was, in fact, before the destructive floods of 1787, the main stream which brought down to the Ganges the great volume of Tīsta water. South of the Padmā there is now no trace of any river bearing this name; and, since the

main stream of the Tīsta broke away to the east in 1787, the Karatoyā has gradually silted up, and it is at the present day a river of minor importance, little used for navigation.

Karaudlā.—*Thakurāt* in the MĀLWĀ AGENCY, Central India.

Karauli State.—State in the east of Rājputāna, lying between 26° 3′ and 26° 49′ N. and 76° 34′ and 77° 24′ E., with an area of 1,242 square miles. It is bounded on the north by Bharatpur; on the north-west and west by Jaipur; on the south and south-east by Gwalior; and on the east by Dholpur. Hills and broken ground characterize almost the whole territory, which lies within a tract locally termed the *Dāng*, a name given to the rugged region immediately above the narrow valley of the Chambal. The principal hills are on the northern border, where several ranges run along, or parallel to, the frontier line, forming somewhat formidable barriers. There is little beauty in these hills; but the military advantages they present caused the selection of one of their eminences, Tahangarh, 1,309 feet above the sea, as the seat of Jādon rule in early times. Along the valley of the Chambal an irregular and lofty wall of rock separates the lands on the river bank from the uplands, of which the southern part of the State consists. From the summits of the passes the view is often picturesque, the rocks standing out in striking contrast to the comparatively rich and undulating plain below. The highest peaks in the south are Bhairon and Utgir, respectively 1,565 and 1,479 feet above the sea. Farther to the north the country falls, the alluvial deposit is deeper, level ground becomes more frequent, and hills stand out more markedly, while in the neighbourhood of the capital the low ground is cut into a labyrinth of ravines.

Physical aspects.

The river CHAMBAL forms the southern boundary, separating the State from Gwalior. Sometimes deep and slow, sometimes too rocky and rapid to admit of the safe passage of a boat, it receives during the rains numerous contributions to its volume, but no considerable perennial stream flows into it within the boundaries of the State. The BANĀS and Morel rivers belong more properly to Jaipur than to Karauli; for the former merely marks for some 4 miles the boundary between these States, while the latter, just before it joins the Banās, is for only 6 miles a river of Karauli and for another 3 miles flows along its border. The Panchnad, so called from its being formed of five streams, all of which rise in Karauli and unite 2 miles north of the capital, usually contains water in the hot months, though often only a few inches in depth. It winds away to the north and eventually joins the Gambhīr in Jaipur territory.

In the western portion of the State a narrow strip of quartzites belonging to the Delhi system is exposed along the Jaipur border,

while Upper Vindhyan sandstones are faulted down against the quartzites to the south-east, and form a horizontal plateau extending to the Chamal river. To the north-west of the fault, some outliers of Lower Vindhyan rocks occur, consisting of limestone, siliceous breccias, and sandstone, which form two long synclinals extending south-west as far as Naraoli.

In addition to the usual small game, tigers, leopards, bears, *nīlgai*, *sāmbar*, and other deer are fairly numerous, especially in the wooded glens near the Chambal in the south-west.

The climate is on the whole salubrious. The rainfall at the capital averages 29 inches a year, and is generally somewhat heavier in the north-east at Māchilpur and the south-east at Mandrael. Within the last twenty years the year of heaviest rainfall has been 1887 ($45\frac{1}{2}$ inches), while in 1896 only a little over 17 inches fell.

History.

The Mahārājā of Karauli is the head of the Jādon clan of Rājputs, who claim descent from Krishna. The Jādons, who have nearly always remained in or near the country of Braj round Muttra, are said to have at one time held half of Alwar and the whole of Bharatpur, Karauli, and Dholpur, besides the British Districts of Gurgaon and Muttra, the greater part of Agra west of the Jumna, and portions of Gwalior lying along the Chambal. In the eleventh century Bijai Pāl, said to have been eighty-eighth in descent from Krishna, established himself in Bayānā, now belonging to Bharatpur, and built the fort overlooking that town. His eldest son, Tahan Pāl, built the well-known fort of Tahangarh, still in Karauli territory, about 1058, and shortly afterwards possessed himself of almost all the country now comprising the Karauli State, as well as a good deal of land to the east as far as Dholpur. In 1196, in the time of Kunwar Pāl, Muhammad Ghorī and his general, Kutb-ud-dīn, captured first Bayānā and then Tahangarh; and on the whole of the Jādon territory falling into the hands of the invaders, Kunwar Pāl fled to a village in the Rewah State. One of his descendants, Arjun Pāl, determined to recover the territory of his ancestors, and about 1327 he started by capturing the fort of Mandrael, and gradually took possession of most of the country formerly held by Tahan Pāl. In 1348 he founded the present capital, Karauli town.

About a hundred years later Mahmūd I of Mālwā is said to have conquered the country, and to have entrusted the government to his son, Fidwi Khān. In the reign of Akbar (1556–1605) the State became incorporated in the Delhi empire, and Gopāl Dās, probably the most famous of the chiefs of Karauli, appears to have been in considerable favour with the emperor. He is mentioned as a commander of 2,000, and is said to have laid the foundations of the Agra fort at Akbar's request. On the decline of the Mughal power the

State was so far subjugated by the Marāthās that they exacted from it a tribute of Rs. 25,000, which, after a time, was commuted for a grant of Māchilpur and its dependencies. By the treaty of November 9, 1817, with the East India Company, Karauli was relieved of the exactions of the Marāthās and taken under British protection; no tribute was levied, but the Mahārājā was to furnish troops according to his means on the requisition of the British Government. In 1825, when the Burmese War was proceeding, and Bharatpur was preparing for resistance under the usurpation of Dūrjan Sāl, Karauli undoubtedly sent troops to the aid of the latter; but on the fall of that fortress in 1826 the Mahārājā made humble professions of submission, and it was deemed unnecessary to take serious notice of his conduct.

The next event of any importance was the celebrated Karauli adoption case. Narsingh Pāl, a minor, became chief in 1850, and died in 1852, having adopted a day before his death a distant kinsman, named Bharat Pāl. It was first proposed to enforce the doctrine of 'lapse,' but finally the adoption of Bharat Pāl was recognized. In the meantime a strong party had been formed in favour of Madan Pāl, a nearer relative, whose claim was supported by the opinions of several chiefs in Rājputāna. An inquiry was ordered; and it was ascertained that the adoption of Bharat Pāl was informal, by reason of the minority of Narsingh Pāl and the omission of certain necessary ceremonies. As Madan Pāl was nearer of kin than Bharat Pāl and was accepted by the Rānīs, by nine of the most influential Thākurs, and by the general feeling of the country, he was recognized as chief in 1854. During the Mutiny of 1857 he evinced a loyal spirit and sent a body of troops against the Kotah mutineers; and for these services he was created a G.C.S.I., a debt of 1·2 lakhs due by him to the British Government was remitted, a dress of honour conferred, and the salute of the Mahārājās of Karauli was permanently increased from 15 to 17 guns. The usual *sanad* guaranteeing the privilege of adoption to the rulers of this State was granted in 1862, and it is remarkable that the last seven chiefs have all succeeded by adoption.

Mahārājā Bhanwar Pāl, the present ruler, was born in 1864, was installed in 1886, obtained full powers in 1889, and, after receiving a K.C.I.E. in 1894, was made a G.C.I.E. in 1897. The nobles are all Jādon Rājputs connected with the ruling house, and, though for the most part illiterate, are a powerful body in the State, and until quite recently frequently defied the authority of the Darbār. The chief among them are Hadoti, Amargarh, Inaiti, Raontra, and Barthūn, and they are called *Thikānadārs*. The Rao of Hadoti is looked upon as the heir to the Karauli *gaddi*, when the ruling chief is without sons.

The only places of archaeological interest are Tahangarh, already

mentioned, and Bahādurpur, 8 miles south of the capital; both are now deserted and in ruins.

Population.

The number of towns and villages in the State is 437, and the population at each of the three enumerations was: (1881) 148,670, (1891) 156,587, and (1901) 156,786. The smallness of the increase during the last decade is ascribed to famines in 1897 and 1899. The territory is divided into five *tahsīls*: namely, Karauli (or *Sadr*), Jirota, Māchilpur, Mandrael, and Utgir, the head-quarters of each being at the place from which it is named, except in the case of Jirota and Utgir, the head-quarters of which are at Sapotra and Karanpur respectively. The only town in the State is the capital, a municipality.

The following table gives the chief statistics of population in 1901:—

Tahsil.	Number of Towns	Number of Villages	Population.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Karauli	1	128	67,581	+ 10.8	2,546
Jirota	...	80	32,646	+ 3.2	542
Māchilpur	...	84	24,015	− 3.8	184
Mandrael	...	58	19,665	− 15.0	227
Utgir	...	86	12,879	− 19.0	107
State total	1	436	156,786	+ 0.1	3,606

Nearly 94 per cent. of the total are Hindus, the worship of Vishnu under the name of Krishna being the prevalent form of religion, and more than 5 per cent. are Muhammadans. The languages mainly spoken are dialects of Western Hindī, including Dāngī and Dāngbhāng.

The principal tribe is the Mīnās, who number 32,000, or more than 20 per cent. of the population, and are the leading agriculturists of the country; next come the Chamārs (23,000), who, besides working in leather, assist in agriculture. Brāhmans number 20,000, and are mostly petty traders, village money-lenders, and cultivators; while the Gūjars (16,000), formerly noted cattle-lifters, are now very fair agriculturists.

Agriculture.

Agricultural conditions vary in different parts of the State. In the highlands of the *Dāng* the soil is clayey, and the slopes of the hills are embanked into successive steps or terraces, only a few yards broad; here rice is grown abundantly, and after it has been reaped barley or gram is sometimes sown. The fields are irrigated from tanks excavated on the tops of the hills. The lowlands of this tract are surrounded by hills on two or three sides and are called *antri*. The soil is of two kinds: the first is composed of earth and sand washed down the hill-sides by the rain-

fall, and is of very fair quality, while the second is hard and stony and is called *kankrīli*. The crops grown here are mostly *bājra* and *moth*, though the better of these two soils produces fair spring crops where irrigation from wells is possible. On the banks of the Chambal the soil is generally rich, and the bed of the river is cultivated to the water's edge in the cold season. The principal crops here are wheat, gram, and barley. Elsewhere, outside the *Dāng*, the soil is for the most part light and sandy, but in places is associated with marl. Excellent crops of *bājra*, *moth*, and *jowār* are produced in the autumn; and by means of irrigation, mostly from wells, good crops of wheat, barley, and gram in the spring.

No very reliable agricultural statistics are available, but the area ordinarily cultivated is about 260 square miles, or rather more than one-fifth of the total area of the State. The principal crops are *bājra* and gram, the areas under which are usually about 58 and 57 square miles respectively; *moth* occupies 36 square miles, wheat about 25, barley nearly 20, rice 18, and *jowār* about 14 square miles. Cotton, poppy, and sugar-cane are cultivated to a certain extent, and *san*-hemp is extensively grown in the neighbourhood of the capital.

Karauli does not excel as a cattle-breeding country; the animals are small though hardy, and attempts to introduce a larger kind have not succeeded as they do not thrive on the rock-grown grass. The goats alone are really good, and many are exported from the *Dāng* to Agra and other places.

Of the total area cultivated, 61 square miles, or about 23 per cent., are generally irrigated. Well-irrigation is chiefly employed in the country surrounding the capital. The total number of wells is said to be 2,813, of which 1,645 are masonry; leathern buckets, drawn up with a rope and pulley by bullocks moving down an inclined plane, are universally used for lifting the water. Tanks are the principal means of irrigation in the rocky and hilly portions; there are said to be 379 tanks of sorts in the State, but only 81 of them have masonry dams. From tanks and streams water is raised by an apparatus termed *dhenklī*, consisting of a wooden pole with a small earthen pot at one end and a heavy weight at the other.

There are no real forests in the State and valuable timber trees are scarce. Above the Chambal valley the commonest tree is the *dhao* (*Anogeissus pendula*), but it is scarcely more than a shrub; other common trees are the *dhāk* (*Butea frondosa*), several kinds of acacia, the cotton-tree (*Bombax malabaricum*), the *sāl* (*Shorea robusta*), the *garjan* (*Dipterocarpus alatus*), and the *nīm* (*Melia Azadirachta*). Near the Chambal in the Mandrael *tahsīl*, and again in a grass reserve 20 miles north-east of the capital, a number of *shīsham* trees (*Dalbergia Sissoo*) are found together; but they are, it is believed, not of natural

growth. The so-called forest area comprises about 200 square miles, and is managed by a department called the Bāgar, whose principal duties are to supply grass for the State elephants and cattle, find and preserve game for the chief and his followers, and provide a revenue by exacting grazing dues. The forest revenue averages about Rs. 6,400 a year, derived mainly from grazing fees, and to a small extent from the sale of grass and firewood, while the annual expenditure is about Rs. 3,000.

Red sandstone abounds throughout the greater portion of the State, and in parts, especially near the capital, white sandstone blends with it. Other varieties of a bluish and yellow colour are also found, the former near Māchilpur, and the latter in the south and west. Iron ore occurs in the hills north-east of Karauli; but the mines would not pay working expenses, and the iron manufactured in the State is smelted from imported material.

Trade and communications.

Manufactures are not of importance. There is a little weaving and dyeing; and a few wooden toys, boxes, and bed-legs painted with coloured lac, and some pewter and brass ornaments are turned out. The *tāt* or gunny-cloth of Karauli is well-known in the neighbouring marts, and a good deal is exported; it is made from *san*-hemp grown near the capital.

The chief exports are cotton, *ghī*, opium, *zīra* (cumin seed), rice and other cereals, while the chief imports are piece-goods, sugar, *gur* (molasses), salt, and indigo. The trade is mainly with the neighbouring States of Jaipur and Gwalior and with Agra District.

There is no railway in the State, the nearest stations being Hindaun Road on the Rājputāna-Mālwā line, 52 miles north of the capital, and Dholpur on the Indian Midland section of the Great Indian Peninsula Railway, about 65 miles to the east. Apart from a few metalled streets in Karauli town, the only metalled road in the State is about 9 miles long. It runs north from the capital in the direction of Hindaun Road as far as the Jaipur border, and was completed in 1886 at a cost of Rs. 37,000. The rest of the roads are mere fair-weather tracks, some passable by bullock-carts, and others only by camels and pack-bullocks. The Chambal river is crossed by means of small boats maintained by the State, and the fare per passenger is usually about a quarter of an anna, the transit of merchandise being specially bargained for. There are five British post offices in the State (four having been opened in January, 1905), and that at the capital is also a telegraph office.

Famine.

The State has been fairly free from famines, but has had its share of indifferent years. In 1868-9 the rains crops failed, and there was considerable distress; but the Mahārājā did his best to mitigate the sufferings of the poor by establishing kitchens and poorhouses and starting public works. A sum of 2 lakhs

was borrowed from the British Government; the price of grain went up to 8 seers per rupee, and there was scarcity of fodder, especially in the highlands of the *Dāng*, where nine-tenths of the cattle are said to have perished. The years 1877–8, 1883–4, 1886–7, and 1896–8 were periods of scarcity and high prices. In 1897 locusts did much damage; and in the following year a pest called *kāta*, akin to the locust, almost entirely destroyed the autumn crops in parts of the State. In 1899–1900 distress was confined to a comparatively small area of 254 square miles, and never amounted to famine. Nevertheless, about 268,000 units were relieved on works; and the total expenditure, including loans (Rs. 23,800) and land revenue remitted (Rs. 46,000) and suspended (Rs. 28,600), exceeded a lakh.

Administration.

The State is governed by the Mahārājā, assisted by a Council of five members. His Highness is President of the Council and has exercised full powers since 1889. Each of the five *tahsīls* is under a *tahsīldār*, and over the latter is a Revenue Officer or Deputy-Collector. In every village there is a State servant called a *tahsīlia*, who is subordinate to the *patwāri* of the circle in which the village is situated.

In the administration of justice the Karauli courts follow generally the British Indian enactments; but certain sections have been added to the Penal Code, including one declaring the killing of cows and peafowl to be offences. The lowest courts are those of *tahsīldārs*, who can try civil suits the value of which does not exceed Rs. 50, and on the criminal side can punish with imprisonment up to one month and with fine up to Rs. 20, or both. The court of the Judicial Officer, besides hearing appeals against the orders of *tahsīldārs*, can try any civil suit, and on the criminal side can sentence up to three years' imprisonment and fine up to Rs. 500, or both; it can also pass a sentence of whipping not exceeding 36 stripes. The Council is the highest court in the State; it hears appeals against the orders of the Judicial Officer, tries criminal cases beyond his powers, and, when presided over by the Mahārājā, can pass sentence of death.

The revenue courts are guided by a simple code of law, introduced in 1881–2, and amended by circulars issued from time to time by the Council to meet local requirements. Petty suits are decided by *tahsīldārs* subject to appeal to the Revenue Officer, who can also take up rent and revenue suits of any value or nature. As on the civil and criminal side, the highest revenue court is the Council.

The normal revenue of the State is about 5 lakhs, of which 2·8 lakhs is derived from land, one lakh from customs, and Rs. 23,000 as tribute from *jāgīrdārs*. The normal expenditure is about 4·4 lakhs, the main items being cost of army and police (1·3 lakhs), gifts and charities (Rs. 70,000), cost of stables (Rs. 33,000), allowance to relatives (Rs. 29,000),

and personal expenses of the chief (Rs. 28,000). The State, owing to a series of years of scarcity, is in debt to the extent of nearly 5 lakhs, which is being paid off by annual instalments of Rs. 55,000.

The State had till quite recently a silver and copper coinage of its own, and it is believed that coins were first struck by Mahārājā Mānak Pāl about 1780. The distinctive mint-marks are the *jhār* (spray) and the *katār* (dagger), and since the time of Madan Pāl (1854–69) each chief has placed on his silver coins the initial letter of his name. The Karauli rupee, which in 1870 was worth half an anna more than the British, subsequently fell slightly in exchange value, and the Darbār resolved to introduce British currency as the sole legal tender in the State. The conversion operations have just been completed.

There are two main kinds of tenure in Karauli: namely, *khālsa*, under which the State itself possesses all rights and privileges over the land; and *muāfi*, under which the State has, subject to certain conditions, conferred such rights and privileges on others. Of the 436 villages in the State, 204 are *khālsa* and 232 are *muāfi*. The latter tenure is of several kinds. The Thākurs or nobles pay as tribute (*khandi*) a fixed sum, which is nominally one-fourth of the produce of the soil, but really much less; and this tribute is in lieu of constant military service, which is not performed in Karauli, though, when military emergencies arise or State pageants occur, the Thākurs come in with their retainers, who on such occasions are maintained at the expense of the Darbār. No tax is ordinarily exacted in addition to the tribute, except in cases of disputed succession, when *nazarāna* is levied. This tenure is known as *bāpoti*; and such estates are not permanently resumed except for treason or serious crime, though in the past they were frequently sequestrated for a time when the holders gave trouble. Another form of *muāfi* tenure is known as *panārth* or religious grant. Under it land is granted in perpetuity free of rent and taxes. Other lands are granted on the ordinary *jāgīr* tenure, while lands are also set apart to meet *zanāna* expenses. In the *khālsa* area the cultivating tenures of the peasantry are numerous. In some villages a fixed sum is paid, varying according to the kind of crop and the nature of the soil, and village expenses may be either included or excluded; in other villages an annual assessment is made by the *tahsildār*, and the land revenue is paid sometimes in cash and sometimes in kind; in other villages again the State merely takes a share, varying from one-fifth to one-half, of the actual produce; and lastly, under the *thekadāri* or *lambardāri* system a village, or a part of one, is leased for a term of five or ten years to the headman or some individual for a fixed sum payable half-yearly. Land revenue is nowadays mostly paid in cash, and the assessment varies from Rs. 15 per acre of wheat, sugar-cane, or poppy, to 12 annas per acre of *moth* or *til*. There is no

complete revenue survey and settlement in Karauli, but one has been in progress since 1891.

No salt is manufactured in the State, nor is any tax of any kind levied on this commodity. By the agreement of 1882 the Mahārājā receives Rs. 5,000 annually from the British Government as compensation, as well as 50 maunds of Sāmbhar salt free of cost and duty. The liquor consumed is mostly made from the flowers of the *mahuā* (*Bassia latifolia*). The right to manufacture and sell country liquor is sold annually by auction, and brings in from Rs. 1,600 to Rs. 1,800; similarly the right to sell intoxicating drugs, such as *gānja*, *bhang*, &c., yields about Rs. 1,200. The revenue derived from the sale of court-fee stamps is about Rs. 6,000.

The only municipality is described in the article on KARAULI TOWN.

There is a Public Works department called *Kamthānā*, but it is not now under professional supervision. A British officer was, however, usefully employed in 1885-6. The expenditure during recent years has averaged about Rs. 12,000; and the principal works have been the metalled road to the Jaipur border in the direction of Hindaun Road (Rs. 37,000), the Neniakī-Gwāri tank (about Rs. 23,000), a couple of bridges (costing respectively Rs. 17,000 and Rs. 30,000), and a building for a school (about Rs. 45,000).

The military force consists of 2,053 men. The cavalry number 260, of whom 171 are irregular; the infantry number 1,761 (1,421 irregular); and there are 32 artillerymen. Of the 56 guns, 10 are said to be serviceable.

The State is divided into seven police circles or *thānas*, besides the *kotwali* at the capital. The police force consists of 358 men of all ranks, and there is in addition a *balai* in each village who performs duties similar to those of the *chaukidār* in British India. The only jail is at the capital.

According to the Census of 1901, about 2.3 per cent. of the people were able to read and write: namely, 4 per cent. of the males and 0.2 per cent. of the females. The State maintains seven schools: namely, a high school and a girls' school at the capital, and primary schools at Mandrael, Karanpur, Sapotra, Kurgaon, and Māchilpur. These are attended by nearly 400 pupils. Education is free, the annual expenditure being about Rs. 4,000. In addition, several private schools are attended by about 200 boys.

The State possesses five hospitals: namely, two at the capital (one exclusively for females), and three in the districts, at Māchilpur, Mandrael, and Sapotra. They contain accommodation for 36 in-patients; and in 1904 the number of cases treated was 31,909, of whom 136 were in-patients, and 2,150 operations were performed.

Vaccination is nowhere compulsory. Three vaccinators under a

native Superintendent are employed; and in 1904–5 the number of persons successfully vaccinated was 5,865, or more than 37 per 1,000 of the population.

[P. W. Powlett, *Gazetteer of Karauli* (1874, under revision), H. E. Drake-Brockman, *Gazetteer of Eastern Rājputāna States* (Ajmer, 1905); *Administration Reports of Karauli* (annually from 1894–5).]

Karauli Town. — Capital of the State of the same name in Rājputāna, situated in 26° 30′ N. and 77° 2′ E., equidistant (about 75 miles) from Muttra, Gwalior, Agra, Alwar, Jaipur, and Tonk. It is also the head-quarters of the *Sadr tahsīl*. It was founded in 1348 by Rājā Arjun Pāl, and was originally called Kalyānpuri after the temple to Kalyānji built about the same time. It is connected with the Rājputāna-Mālwā Railway at Hindaun Road by a metalled road 52 miles long. The population in 1901 was 23,482, of whom 76 per cent. were Hindus and 22 per cent. Muhammadans.

Viewed from some points whence the palace is seen to advantage, the town has a striking appearance. It is surrounded by a wall of red sandstone, and is also protected on the north and east by a network of ravines. To the south and west the ground is comparatively level; but advantage has been taken of a conveniently situated watercourse to form a moat to the town wall, while an outer wall and ditch, defended by bastions, has been carried along the other bank, thus forming a double line of defence. These fortifications, though too strong for the desultory attacks of the Marāthās, would be far less formidable to regular troops than were the mud walls of Bharatpur. The town wall, in spite of its handsome appearance, is unsubstantially built, being composed of ill-cemented stones faced by thin slabs after the fashion which prevails throughout the State. The circumference of the town is somewhat less than 2¼ miles, and there are six gates and eleven posterns. The streets are rather narrow and irregular, but since 1884 most of them have been flagged with the local stone, and they can easily be cleansed as the natural drainage is excellent. There are several costly houses and a few handsome temples; of the latter the most beautiful is perhaps the Pratāp Saromān temple, built by Mahārājā Pratāp Pāl (1837–50) in the modern Muttra style. The palace is about 200 yards from the eastern wall of the town; it was founded by Arjun Pāl in the fourteenth century, but little or nothing of the original structure can now be traced. In its present state it was erected about the middle of the eighteenth century by Rājā Gopāl Singh, who adopted the Delhi style of architecture with which his residence in that city had made him familiar. The whole block of buildings is surrounded by a lofty bastioned wall in which there are two fine gates.

A municipality was constituted in 1884, and the committee has

successfully looked after the paving and lighting of the streets and the general conservancy of the town. Indeed, Karauli is one of the cleanest towns in Rājputāna. The income of the municipality varies from Rs. 7,000 to Rs. 9,000, derived mainly from a small octroi duty on cereals; and the expenditure is somewhat less. The jail has accommodation for 77 prisoners, who are employed on cotton cloth and carpet-weaving; attached to the jail is a small printing press, in which some of the prisoners occasionally work.

Besides a few private schools in which only plain ciphering and letter-writing are taught, and a girls' school, the town possesses a high school teaching up to the matriculation standard of the Allahābād University, with an Oriental department affiliated to the Punjab University, and a *patwāri* class. This institution costs the State about Rs. 3,000 a year and education is free; the daily average attendance in 1904 was 227. Since the high school was established in 1889, 6 students have passed the matriculation at the Allahābād University and 39 have passed various Oriental examinations of the Punjab University. There are two hospitals, a general and a female. The latter, which was opened as a dispensary for out-patients in 1891, is maintained from municipal funds.

Karchanā.—The central of the three trans-Jumna *tahsīls* of Allahābād District, United Provinces, conterminous with the *pargana* of Arail, lying between 25° 9′ and 25° 26′ N. and 81° 44′ and 82° 5′ E., with an area of 257 square miles. Population fell from 134,818 in 1891 to 127,327 in 1901. There are 338 villages and one small town. The demand for land revenue in 1903–4 was Rs. 2,64,000, and for cesses Rs. 42,000; but the revised settlement has reduced the revenue to Rs. 2,39,000 The density of population, 495 persons per square mile, is below the District average. The *tahsīl* is bounded on the north-east by the Ganges, on the north-west by the Jumna, and on the south and east by the Tons. Bordering on the rivers are tracts of high sandy soil much cut up by ravines, except towards the Ganges. The central portion consists of a fertile loam, which changes in the west to clay, where coarse rice is the staple crop. Though situated south of the Jumna, the country resembles the Doāb, but facilities for irrigation are not good. In 1903–4 the area under cultivation was 174 square miles, of which 28 were irrigated. Wells supply about two-thirds of the irrigated area, and *jhīls* the remainder.

Karenni.—The country of the Red Karens, Burma, lying on both banks of the Salween, between 18° 50′ and 19° 55′ N. and 97° 10′ and 97° 50′ E. It is bounded on the north by the Shan States, on the south by Salween District, on the east by Siam, and on the west by Toungoo District. At Loikaw, a village of 2,042 inhabitants towards the north of the tract, an Assistant Superintendent of the Shan States

is posted as Agent of the British Government, with a military police guard under an assistant commandant, and control is exercised by him and the Superintendent at Taunggyi over the chiefs. The country is divided in a general way into eastern and western Karenni, the former consisting of the single State of Gantarawadi (2,500 square miles), the latter of the four small States of Kyebogyi (350 square miles), Bawlake (200 square miles), Nammekon (50 square miles), and Naungpale (30 square miles). The north-western portion is an open, fairly level plain, well watered and in some parts swampy. It lies in the basin of the Nam Pilu or Balu stream, which drains the Inle Lake, and, after flowing past Loikaw, sinks into the ground to the south-east of that village before joining the Nam Pawn. The rest of the Karenni country is mountainous, with occasional fertile valleys, but for the most part arid. It is watered by the Salween and its tributary the Nam Pawn, which are separated by a ridge 5,000 feet in height.

Nothing definite is known of the history of the Karenni States prior to the middle of the nineteenth century. During the latter part of that century they were the scene of constant hostilities, occasioned by incursions from the Shan States and by intestinal disputes. Certain features of their history since the annexation of Upper Burma are given in the article on the SOUTHERN SHAN STATES. Gantarawadi was heavily fined for the disturbances which Sawlapaw had occasioned in 1888, and Sawlawi undertook to pay a tribute of Rs. 5,000 to the British Government. This chief was raised to the dignity of Sawbwa in 1901. The other four chiefs were formally recognized as feudatories in 1892, and appointed Myozas. Kyebogyi, Bawlake, and Nammekon pay a tribute of Rs. 100 each, and Naungpale Rs. 50. The population of Karenni was estimated in 1901 at 45,975, distributed as follows over the different States: Gantarawadi, 26,333; Kyebogyi, 9,867; Bawlake, 5,701; Nammekon, 2,629; and Naungpale, 1,265. The inhabitants are said to have decreased considerably of late, owing to the diminution of water in the Nam Pilu valley the most cultivated part of the country. More than half are Red Karens, who are at a low stage of civilization, and very far from clean in their persons and habits. Other people represented are Shans, Taungthus, Bres, Padaungs, and White and other Karens. The chief wealth of the country is teak timber, rich forests lying on the left bank of the Salween, on both banks of the Nam Pawn, and in the north-western States. The total revenue of the States in 1893-4 was Rs. 37,000.

Karens.—A collection of Indo-Chinese tribes, the representatives in Burma of one of the smaller immigration waves that entered the country from the direction of South-Western China during prehistoric times. The arrival of the Karens in the country in all probability preceded that of the Tai (Shans), and may possibly have been earlier than

of the Burmans. It is more probable, however, that they appeared . . latter, and in any case there is reason to believe that they were . . than the representatives of the Mon-Anam races. The . . may be divided into three main divisions: the Sgaw, the Pwo, . Bghai. The Sgaw and Pwo are generally looked upon as the . . They are found down the whole of the eastern border . Burma, from Toungoo to Mergui, in the delta of the Irra- . on the Pegu Yoma; in fact it is only in the Arakan Division, . . and in the Districts of Prome and Thayetmyo that they do . . an important section of the community in the Lower province. . most numerous in the Districts of Thaton, Myaungmya, and . In 1901, 86,434 persons were returned as Sgaw-Karens, and . . Pwo-Karens, a total of 457,355 having been shown as Karens . . no division specified. These last were practically all either Sgaw or Pwo, probably more of the former than of the latter.

The Karens are for the most part hill-dwellers, but a very considerable proportion of them are now permanently settled in the plains. The Sgaw plain-dwellers are often known as Burmese Karens, and the Pwo as Talaing Karens. In physique there is no great difference between the Karens of Lower Burma and their Burman and Talaing neighbours; they are not exceptionally flat-faced, and sharp features are frequently met with. Their eyes are not oblique, like those of the Chinese. In dress they have to some extent adopted the style of the people in whose neighbourhood they live. The typical Karen garment, . . re the national dress is still worn, is the *thindaing* or smock, a long, sleeveless or almost sleeveless garment, which is slipped over the head and falls away from the neck, leaving a V-shaped opening in front and behind. Where this is worn it forms the sole upper garment of the men, boys, and unmarried girls. In the case of married women the *thindaing* is shorter, is often highly decorated, and is worn over a skirt. Clan distinctions were, and to a certain extent still are, indicated by differences in dress, as for instance in the embroidery on the hem of the men's smocks. The typical hill Karen house, like that of the Kachin, is far longer and larger than that built by the people of the plains. The Karens practise agriculture, their cultivation, when resident in the hills, being of the ordinary *taungya* description. They are excellent foresters, and ever since the annexation of Pegu their relations with the Forest department have been intimate. The original religion of the Karens was spirit-worship, and a considerable number still hold by their old faith; but some have embraced Buddhism and a large proportion of them have become Christians. In their spontaneous readiness to accept Christianity they are probably unique among the more backward races of Asia. The Karens have been enlisted to some extent in the Burma military police. At one time a battalion was

recruited entirely from the Karens; but a riot that occurred in its ranks in 1899 led to its abolition as a separate unit, and to the distribution of the companies of which it was composed over other battalions. The two main divisions of the Karens proper have dialects of their own which differ very considerably. It is probable that the Sgaw dialect will in time supersede the Pwo for educational purposes. The language is tonal, and belongs to the Siamese-Chinese sub-family of the Indo-Chinese family.

Of the Bghai division of the Karen race, the Red Karens of Karenni have hitherto been the best known. Other representatives of this division are called Padaungs, Bres, Zayeins, Sawngtüng Karens, Loilong Karens, White Karens, and the like. The Bghai inhabit the south-western corner of the Shan States, between 18° 30′ and 20° 30′ N. They were found mostly in the 'estimated' areas in 1901, and the precise strength of the different tribes is not exactly known. The total of Red Karens would appear, however, to be above 29,000, that of the Padaungs between 9,000 and 10,000, and that of the Bres about 3,500. Most of the Zayeins live in territory that was regularly enumerated; they aggregated 4,440. The Bghai tribes vary considerably in language, customs, and dress. The male costume consists as a rule of short trousers and a jacket or blanket; the female costume, of a short kilt with either a short smock or, in the case of the Red Karen women, of a single piece of cloth, draped over the upper portion of the body. Leg and neck ornaments are common among the women, the former being specially noticeable in Karenni in the shape of beaded garters, the latter in the Padaung country, where the women lengthen their necks artificially by means of a succession of brass rings which is added to year by year. All the Bghai are spirit-worshippers, and the majority of them are at a lower stage of civilization than the Karens of Lower Burma. The Bghai dialects, though differing, are probably all variants of a common speech.

Karhal Tahsil.—Central southern *tahsīl* of Mainpurī District, United Provinces, comprising the *parganas* of Karhal and Barnāhal, and lying between 26° 56′ and 27° 9′ N. and 78° 46′ and 79° 10′ E., with an area of 218 square miles. Population fell from 100,297 in 1891 to 98,398 in 1901. There are 189 villages and one town, KARHAL (population, 6,268), the *tahsīl* head-quarters. The demand for land revenue in 1903–4 was Rs. 1,75,000, and for cesses Rs. 28,000. The density of population, 451 persons per square mile, is the lowest in the District, and this is the only *tahsīl* which lost in population between 1891 and 1901. The Sengar, flowing from north-west to south-east, divides the *tahsīl* into two parts. The eastern portion forms part of the great central loam tract; and its fertility is interrupted only by patches of barren land called *ūsar*, and great swamps from which are formed

the Puraha and Ahneya streams flowing into Etāwah. Although the west is more sandy it contains no *ūsar*; this tract suffered during the scarcity of 1896–7. In 1901–2 the area under cultivation was 110 square miles, of which 101 were irrigated. The Etāwah branch of the Lower Ganges Canal serves the tract east of the Sengar, supplying about half of the irrigated area; and wells irrigate most of the remainder.

Karhal Town.—Head-quarters of the *tahsīl* of the same name in Mainpurī District, United Provinces, situated in 27° N. and 78° 57′ E., on the road from Mainpurī town to Etāwah. Population (1901), 6,268. The town contains a bazar of poor shops, but has some substantial brick-built houses. A Saiyid family, some of the members of which are reputed to possess miraculous powers, resides here. The *tahsīlī* and dispensary are the chief public buildings. Karhal is administered under Act XX of 1856, with an income of about Rs. 1,400. Trade is local. The *tahsīlī* school has about 90 pupils.

Karlāna.—Petty State in KĀTHIĀWĀR, Bombay.

Kārikāl (*Kāraikkāl*, 'fish pass'; the *Carical Cariukalla* of Bartolomeo).—French Settlement and town on the Coromandel coast, lying between the *tāluks* of Māyavaram, Nannilam, and Negapatam in the Tanjore District of Madras and the Bay of Bengal. The town is situated in 10° 55′ N. and 79° 50′ E. The Settlement is divided into three communes, containing 110 villages in all, and covering an area of 53 square miles, and is governed by an Administrator subordinate to the Governor at Pondicherry. The population has been rapidly decreasing. In 1883 it was 93,055; in 1891, 70,526; and in 1901, 56,595; but the density is still very high, being 1,068 persons per square mile. Kumbakonam is the only *tāluk* in Tanjore District which has a higher density. Each of the three communes—namely, Kārikāl, La Grande Aldée, and Nedungādu—possesses a mayor and council. The members are all elected by universal suffrage, but in the municipality of Kārikāl half the number of seats is reserved for Europeans or their descendants. The country is very fertile, being irrigated by seven branches of the Cauvery: namely, the Nandalār, Nāttār, Arasalār, Tirumalarājanār, Mudikondānār, Vānjiār, and Nūlār, besides many smaller channels.

The capital of the Settlement is situated on the north bank of the Arasalār, about 1½ miles from its mouth. It has a brisk trade in rice with Ceylon and to a less extent with the Straits Settlements. In 1904 it had no commerce whatever with France, and very little with other French colonies. The total imports amounted to £49,000, of which £1,600 came from the French colonies. The total exports were valued at £106,000, out of which only £600 went to the French colonies. The port is merely an open roadstead, provided with a lighthouse

142 feet high, the light in which has a range of from 8 to 10 miles. Indian labourers emigrate from Kārikāl to the French colonies in large numbers. Inland customs are governed by a convention with the Madras Government, and all salt consumed in French territory is by treaty purchased from the British on payment of an annual indemnity of Rs. 20,748. In 1899 Kārikāl was connected with Peralam on the Tanjore District Board Railway. The line is 14⅔ miles long and is owned by the French Government, but worked by the South Indian Railway.

Kārikāl was promised to the French in 1738, in return for their assistance, by Sayājī, the exiled Rājā of Tanjore. He did not, however, keep his promise; and it was only by the assistance of Chanda Sāhib, then at war with Sayājī, that a grant of the town was obtained in the following year. An additional cession of 81 villages was obtained in 1749 under a like pressure and with the same assistance, when the French and Chanda Sāhib were besieging Tanjore. The latter grant was confirmed by treaty in 1754. The town and fort were besieged by an English force under Major Monson in 1760, and. after a gallant defence of ten days, surrendered on April 15. They came into British possession again on three subsequent occasions (*see* FRENCH POSSESSIONS), and were finally restored to the French on January 14, 1817.

Karīmganj Subdivision.—Subdivision in the south-east of Sylhet District, Eastern Bengal and Assam, lying between 24° 15′ and 25° N. and 92° 2′ and 92° 36′ E., with an area of 1,048 square miles. It contains one town, KARĪMGANJ (population, 5,692), the head-quarters; and 924 villages. The northern portion of the subdivision is a level plain, but to the south it is much broken by hills. The Saraspur and Pāthārkāndi ranges project into the valley from the Lushai-Tippera system; and a third range of low hills, which intervenes between them, separates the valleys of the Langai and Singlā rivers. The lower hills have been largely taken up for tea, but the upper valleys of these two rivers are still, to a great extent, covered with jungle. Attempts have been made to colonize this tract; but they have only met with a qualified measure of success, as it is very inaccessible, and much of the land is not well adapted for cultivation. At the extreme end of this valley are located the only forest Reserves in the District, which cover an area of 103 square miles. The population of Karīmganj in 1891 was 384,638, and by 1901 had risen to 410,460, an increase of nearly 7 per cent. Like the rest of Sylhet, the subdivision is densely peopled; and, in spite of the large tracts of waste land in the south, the density in 1901 was 392 persons per square mile, which is but little below the figure for the District as a whole. The rainfall at Karīmganj town is as much as 160 inches in the year, but in the Langai valley it is about 50 inches less. The staple food-crop is *sail* or transplanted winter rice, and the

dense groves of areca palms surrounding the villages are a special feature in the landscape. The cultivation of tea is an important industry: in 1904 there were 35 gardens with 21,413 acres under plant, which gave employment to 51 Europeans and 24,126 natives. Karīmganj is almost invariably in charge of a European magistrate, and for administrative purposes is divided into the two *thānas* of Karīmganj and Jaldhub. The demand on account of land revenue and cesses in 1903–4 was Rs. 2,24,000.

Karīmganj Town.—Head-quarters of the subdivision of the same name in Sylhet District, Eastern Bengal and Assam, situated in 24° 52′ N. and 92° 22′ E., on the left bank of the Kusiyārā river. The town is favourably situated for trade, as it is a port of call for the river steamers, and has a station on the Assam-Bengal Railway. Population (1901), 5,692. The public buildings include the Magistrate's and Munsif's courts, a subsidiary jail with accommodation for 35 persons, a hospital with 6 beds, and a high school with an average attendance of 176 boys. The Subdivisional Officer is almost invariably a European, and there is a branch of the Welsh Presbyterian Mission in the town. Most of the offices are located on low hills which command a fine view across the dense groves of areca palm, with which the neighbourhood abounds, to the hills of North Cāchār. There is a considerable export trade to Bengal in unhusked rice, mustard, linseed, bamboo mats, and timber. The principal imports are cotton piece-goods, grain and pulse, kerosene and other oils, salt, sugar, and spices. The majority of the merchants are natives of the District, but there are a few Mārwāris from Rājputāna.

Karīmganj.—Village in the Kishorganj subdivision of Mymensingh District, Eastern Bengal and Assam, situated in 24° 28′ N. and 90° 52′ E., 9 miles east of Kishorganj. Population (1901), 136. It is a large bazar and reed and jute mart, and has given its name to a well-known variety of jute.

Karīmnagar District.—District in the Warangal Division of the Hyderābād State, formerly known as Elgandal. It is bounded on the north by Ādilābād; on the east by the Bastar State of the Central Provinces; on the south by Warangal: and on the west by Medak and Nizāmābād. In consequence of the changes made in 1905, its area has been reduced to 5,369 square miles, including *jāgirs*. A range of hills extends in a north-easterly direction between Gurrapalli and Jagtial, terminating at Vemalkurti near the Godāvari. A second range, running parallel to the former, stretches from Sunigram to Mallangūr. A third range starts in the south-western corner of the District from the valley of the Māner river, runs in a north-easterly direction, and, after intersecting the Sunigram range, passes beyond Rāmgiri and terminates near the Godāvari. The principal river is the Godāvari, which flows through the northern portion, forming the northern and eastern boundary, and

partially separating the District from Adilābād in the north and from Bastar in the east. The next important river is the Māner, a tributary of the Godāvari, which traverses the District from west to east as far as Kārlagunta, and thence flows due north, till it falls into the Godāvari in the Mahādeopur *tāluk*. The Peddavāgu and Chelluvāgu are minor tributaries of the Godāvari.

The geological formations are the Archaean gneiss, and the Cuddapah, Sullavai, and Gondwāna series. Gneiss occupies most of the District, the remaining formations occurring in the east.

The flora of the District includes teak, mango, custard-apple, tamarind, ebony, black-wood, satin-wood, *tarvar* (*Cassia auriculata*), *babūl* (*Acacia arabica*), *nallāmaddi* (*Terminalia tomentosa*), and *eppa* (*Hardwickia binata*).

Karīmnagar is covered with a large extent of jungle and forest, which give cover to tigers, leopards, bears, hyenas, wolves, wild hog, and wild dogs, while in the plains *sāmbar*, spotted deer, and *nīlgai* are met with everywhere.

With the exception of Mahādeopur and parts of Sirsilla and Jagtial, the District is healthy. The temperature at Karīmnagar and Jamikunta in May rises to 110°, and in the remaining *tāluks* it ranges between 100° and 105°. In December it falls to 60°. The annual rainfall averages about 33 inches.

The population of the area of the present District in 1901 was 861,833. It comprises seven *tāluks*: KARĪMNAGAR, JAMIKUNTA, SULTĀNĀBĀD, JAGTIAL, SIRSILLA, MAHĀDEOPUR, and PARKĀL. The chief towns are JAGTIAL, MANTHANI, KORATLA, KARĪMNAGAR, and VEMALWĀDĀ. About 96 per cent. of the population are Hindus; 90 per cent. speak Telugu, and 6 per cent. Urdū.

The land revenue demand of the District as at present constituted is about 22·6 lakhs.

Karīmnagar Tāluk.—*Tāluk* in Karīmnagar District, Hyderābād State, with an area of 1,012 square miles. The population in 1901, including *jāgīrs*, was 138,591, compared with 170,676 in 1891, the decrease being due to famine and cholera. The *tāluk* contains one town, KARĪMNAGAR (population, 5,752), the District and *tāluk* head-quarters; and 186 villages, of which 26 are *jāgīr*. The land revenue in 1901 amounted to 4·3 lakhs. Rice is largely raised with irrigation from tanks and wells. The Māner river flows through the *tāluk* from west to east.

Karīmnagar Town.—Head-quarters of the District and *tāluk* of Karīmnagar, Hyderābād State, situated in 18° 26′ N. and 79° 8′ E., on the Māner river, 6 miles east of Elgandal. Population (1901), 5,752. Besides the District and *tāluk* offices, it contains the District civil court, two dispensaries, one of which provides *yūnāni* treatment, a post

office, local board and municipal offices, several State schools, a mission school, a female mission hospital, a District jail, and a tannery. The town is noted for its fine filigree work.

Karjat (1).—Southern *tāluka* of Ahmadnagar District, Bombay, lying between 18° 20′ and 18° 50′ N. and 74° 43′ and 75° 13′ E., with an area of 565 square miles. It contains 81 villages, including Karjat, the head-quarters. The population in 1901 was 35,619, compared with 48,828 in 1891. The decrease, which is greater than in any other *tāluka*, is primarily due to emigration to the Nizām's Dominions and other regions, consequent upon famine. It is the most thinly populated in the District, with a density of only 63 persons per square mile. The demand for land revenue in 1903–4 was Rs. 80,000 and for cesses Rs. 6,000. A chain of low hills with flat summits traverses the *tāluka* from north-west to south-east, dividing it into two equal parts. The streams from the eastern slope flow into the Sīna river, and from the western into the Bhīma. The country presents a dismal appearance, owing to the large proportion of rocky and unprofitable ground, almost destitute of vegetation. There are a few level tracts, some of considerable extent, where the soil is deep and rich. In the neighbourhood of the hills the soil is of the poorest description. The rainfall is extremely uncertain, and good harvests are rare. It suffered severely in the famines of 1876–7 and 1899–1901, when many villages were deserted. The cultivators, owing to a succession of bad harvests, are nearly all in debt.

Karjat (2).—North-eastern *tāluka* of Kolāba District, Bombay, lying between 18° 45′ and 19° 8′ N. and 73° 11′ and 73° 33′ E., with an area of 359 square miles, including the petty subdivision (*petha*) of Khālāpur. There are 270 villages, the head-quarters being at Karjat. The population in 1901 was 87,415, compared with 85,288 in 1891. The density, 243 persons per square mile, is much below the District average. The demand for land revenue in 1903–4 was Rs. 1,61,000, and for cesses Rs. 10,000. Karjat may be described as a rough hilly tract, lying between the Western Ghāts and the hills of Mātherān. On its northern side dales and valleys diversify the surface; the lowlands are divided into rice-fields, while the higher grounds are clothed with teak, *ain*, and black-wood. In the east the woodlands become a forest. The Ulhās and other streams which rise in the Western Ghāts flow through the *tāluka*, but become dry channels in the hot season. The rainfall is fairly plentiful, and failure of the rice crop rare. Drinking-water is scarce. The rice soil is black, and the upland soil reddish. The climate varies greatly with the season. In January and February the nights are extremely cold. The rainfall during the ten years ending 1903 averaged 130 inches.

Kārkala.—Village in the Udipi *tāluk* of South Kanara District,

Madras, situated in 13° 13′ N. and 74° 59′ E. Population (1901), 5,364. It was once a populous Jain town and the seat of the Bhairarasa Wodeyars, a powerful Jain family of which no representatives are now left. In the neighbourhood are many Jain remains. The most remarkable is the monolithic statue of Gomata Rāya, erected by the ruling prince in A.D. 1431. It stands in an enclosure on the summit of a rocky hill south of the town overlooking a picturesque lake, and is 41 feet 5 inches high, with the traditional form and lineaments of Buddha. Once in sixty years Jains from all parts gather and bathe the statue with coco-nut milk. To the north, on the summit of a smaller hill, stands a square temple with projecting porticoes facing each of the four quarters, its columns, pediments, and friezes being alike richly carved and ornamented. Within, facing each entrance, stand groups of three life-sized figures in burnished copper, counterparts of the great statue above. At Halcangadi, close by, is the finest Jain *stambha* (pillar) in the District. It has a monolithic shaft 33 feet high in eight segments, each beautifully and variously ornamented, supporting an elegant capital and topped by a stone shrine containing a statue. The total height is about 50 feet. Kārkala is situated on one of the principal roads leading to Mysore, in the centre of a fertile tract containing many fine areca gardens. It has a considerable trade in rice and other local produce, and is the head-quarters of a deputy-*tahsīldār*.

Karkamb.—Town in the Pandharpur *tāluka* of Sholāpur District, Bombay, situated in 17° 52′ N. and 75° 18′ E., 13 miles north of Pandharpur town. Population (1901), 5,571. Karkamb has a large weaving and thread-dyeing industry, with about 500 looms, chiefly producing cheap cloth for women's robes. About 1,500 persons are employed in the weaving industry, which has an output of the annual value of 1⅔ lakhs. The establishments for thread-dyeing number 11. The betel-vine is largely grown. Weekly markets are held on Mondays, when cattle, grain, and cloth are sold. The town contains two schools, one of which is for girls.

Kārli (*Kārla*).—Village in the Māval *tāluka* of Poona District, Bombay, situated in 18° 45′ N. and 73° 29′ E., on the road between Bombay and Poona. Population (1901), 603. Some celebrated caves are 2½ miles from the Kārli and 5 from the Lonauli station on the Poona section of the Great Indian Peninsula Railway. The principal cave is thus described by Mr. J. Fergusson in his *History of Eastern and Indian Architecture*.—

'It is certainly the largest as well as the most complete *chaitya* cave hitherto discovered in India, and was excavated at a time when the style was in its greatest purity. In it, all the architectural defects of the previous examples are removed; the pillars of the nave are quite perpendicular. The screen is ornamented with sculpture—its first

appearance apparently in such a position—and the style had reached a perfection never afterwards surpassed.

'In the cave there is an inscription on the side of the porch, and another on the lion-pillar in front, which are certainly integral, and ascribe its excavation to the Mahārājā Bhūti or Deva Bhūti, who, according to the Purānas, reigned 78 B.C.; and if this is so, they fix the age of this typical example beyond all cavil.

'The building resembles, to a very great extent, an early Christian church in its arrangements, consisting of a nave and side aisles, terminating in an apse or semi-dome, round which the aisle is carried. The general dimensions of the interior are 126 feet from the entrance to the back wall, by 45 feet 7 inches in width. The side aisles, however, are very much narrower than in Christian churches, the central one being 25 feet 7 inches, so that the others are only 10 feet wide, including the thickness of the pillars. As a scale for comparison, it may be mentioned that its arrangement and dimensions are very similar to those of the choir of Norwich Cathedral, or of the Abbaye aux Hommes at Caen, omitting the outer aisles in the latter building. The thickness of the piers at Norwich and Caen nearly corresponds to the breadth of the aisles in the Indian temple. In height, however, Kārli is very inferior, being only 42 feet, or perhaps 45 feet from the floor to the apex, as nearly as can be ascertained.

'Fifteen pillars on each side separate the nave from the aisles; each pillar has a tall base, an octagonal shaft, and a richly ornamented capital, on which kneel two elephants, each bearing two figures, generally a man and a woman, but sometimes two females, all very much better executed than such ornaments usually are. The seven pillars behind the "altar" are plain octagonal piers, without either base or capital, and the four under the entrance gallery differ considerably from those at the sides. The sculptures on the capitals supply the place usually occupied by frieze and cornice in Grecian architecture; and in other examples plain painted surfaces occupy the same space. Above this springs the roof, semicircular in general section but somewhat stilted at the sides, so as to make its height greater than the semi-diameter. It is ornamented even at this day by a series of wooden ribs, probably coeval with the excavation, which prove beyond the shadow of a doubt that the roof is not a copy of a masonry arch, but of some sort of timber construction which we cannot now very well understand.

'Immediately under the semi-dome of the apse, and nearly where the altar stands in Christian churches, is placed the *dāgoba*, in this instance a plain dome slightly stilted on a circular drum. As there are no ornaments on it now, and no mortices for woodwork, it probably was originally plastered and painted, or may have been adorned with hangings, which some of the sculptured representations would lead us to suppose was the usual mode of ornamenting these altars. It is surmounted by a Tee, and on this still stand the remains of an umbrella in wood, very much decayed and distorted by age.

'Opposite this is the entrance, consisting of three doorways, under a gallery exactly corresponding with our rood-loft, one leading to the centre and one to each of the side aisles; and over the gallery the

whole end of the hall is open, as in all these *chaitya* halls, forming one great window, through which all the light is admitted. This great window is formed in the shape of a horseshoe, and exactly resembles those used as ornaments on the façade of this cave, as well as on those of Bhāja, Bedsa, and at Nāsik. Within the arch is a framework or centring of work standing free. This, so far as we can judge, is, like the ribs of the interior, coeval with the building; at all events, if it has been renewed, it is an exact copy of the original form, for it is found repeated in stone in all the niches of the façade, over the doorways, and generally as an ornament everywhere, and with the Buddhist "rail," copied from Sānchi, forms the most usual ornament of the style.

'The outer porch is considerably wider than the body of the building, being 52 feet wide, and is closed in front by a screen composed of two stout octagonal pillars, without either base or capital, supporting what is now a plain mass of rock, but once ornamented by a wooden gallery forming the principal ornament of the façade. Above this, a dwarf colonnade or attic of four columns between pilasters admitted light to the great window; and this again was surmounted by a wooden cornice or ornament of some sort, though we cannot now restore it, since only the mortices remain that attached it to the rock.

'In advance of this screen stands the lion-pillar, in this instance a plain shaft with thirty two flutes, or rather faces, surmounted by a capital not unlike that at Kesariyā, but at Kārli supporting four lions instead of one; they seem almost certainly to have supported a *chakra*, or Buddhist wheel. A similar pillar probably stood on the opposite side, but it has either fallen or been taken down to make way for the little [Hindu] temple that now occupies its place.

'The absence of the wooden ornaments of the external porch, as well as our ignorance of the mode in which this temple was finished laterally, and the porch joined to the main temple, prevent us from judging what the effect of the front would have been if belonging to a free-standing building. But the proportions of such parts as remain are so good, and the effect of the whole so pleasing, that there can be little hesitation in ascribing to such a design a tolerably high rank among architectural compositions.

'Of the interior we can judge perfectly, and it certainly is as solemn and grand as any interior can well be, and the mode of lighting the most perfect—one undivided volume of light coming through a single opening overhead at a very favourable angle and falling directly on the "altar" or principal object in the building, leaving the rest in comparative obscurity. The effect is considerably heightened by the closely-set thick columns that divide the three aisles from one another, as they suffice to prevent the boundary walls from ever being seen; and as there are no openings in the walls, the view between the pillars is practically unlimited.

'These peculiarities are found more or less developed in all the other caves of the same class in India, varying only with the age and the gradual change that took place from the more purely wooden forms of these caves to the lithic or stone architecture of the more modern ones. This is the principal test by which their relative ages can be determined, and it proves incontestably that the Kārli cave was

excavated not very long after stone came to be used as a building material in India.'

Karmad.—Petty State in KĀTHIĀWĀR, Bombay.

Karmāla Tāluka.—*Tāluka* of Sholāpur District, Bombay, lying between 17° 58′ and 18° 33′ N. and 74° 48′ and 75° 26′ E., with an area of 772 square miles. It contains one town, KARMĀLA (population, 7,301), the head-quarters; and 123 villages. The population in 1901 was 67,558, compared with 93,353 in 1891. The great decrease is due to mortality and emigration during the famine of 1899–1901. The *tāluka* is one of the most thinly populated in the District, with a density of only 88 persons per square mile. The demand for land revenue in 1903–4 was 1·7 lakhs, and for cesses Rs. 11,000. Karmāla is in the north of the District, between the Bhīma on the west and the Sīna on the east. Except the hills near Kem and the dividing ridge, forming the watershed between the two rivers, the country is flat; towards the north it is rough and broken, crossed by many streams. About half consists of rich black soil, and the rest is red and gravelly. The seasons are uncertain—a really good one, as a rule, not occurring oftener than once in three or four years, when, however, the harvest is exceedingly abundant. The annual rainfall averages 23 inches. Weekly fairs are held at eight towns and villages; and at Sonāri an annual fair in April is attended by about 6,000 persons.

Karmāla Town.—Head quarters of the *tāluka* of the same name in Sholāpur District, Bombay, situated in 18° 24′ N. and 75° 12′ E., 11 miles north of the Jeur station on the south-east section of the Great Indian Peninsula Railway. Population (1901), 7,301. Karmāla was originally the seat of a branch of the Nimbālkar family. The founder began and his son finished a fort, which still exists and is used for the *tāluka* offices. This fort, one of the largest in the Deccan, extends over a quarter of a square mile, and contains about a hundred houses. Karmāla grew and became a large trade centre, being a crossing station for the traffic from Bālāghāt through Bārsi to Poona, and between Ahmadnagar and Sholāpur. Most of this traffic has now passed to the railway, but Karmāla is still a large mart for cattle, grain, oil, and piece-goods. A weekly market is held on Friday, and the town has a small weaving industry. The water-supply is derived from wells three-quarters of a mile to the south, the water being carried through an earthenware conduit to dipping wells in the town. An annual fair is held here, lasting four days. The town possesses a large temple of Ambā Bai. The municipality, established in 1867, had an average income during the decade ending 1901 of Rs. 8,800. In 1903–4 the income was Rs. 9,100 Karmāla contains a Subordinate Judge's court, three schools, including one maintained by the American Congregational Mission, and a dispensary.

Karmgarh.—A *nizāmat* or administrative district of the Patiāla State, Punjab, lying between 29° 23′ and 30° 27′ N. and 75° 40′ and 76° 36′ E., with an area of 1,834 square miles. It had a population in 1901 of 500,635, compared with 500,225 in 1891, dwelling in four towns—PATIĀLA, SAMĀNA, SUNĀM, and SANAUR—and 665 villages. The head-quarters are at Bhawānigarh or Dhodān, a village in the Bhawānigarh *tahsīl*. The land revenue and cesses in 1903–4 amounted to 9·5 lakhs. The *nizāmat* consists of a fairly compact area in the south-east of the main portion of the State, and is divided into four *tahsīls*—PATIĀLA, BHAWĀNIGARH, SUNĀM, and NARWĀNA—of which the first three lie in that order from east to west, partly in the Pawādh and partly in the Jangal tract, on the north of the Ghaggar river, while the fourth *tahsīl*, Narwāna, lies on its south bank in the Bāngar.

Karnāl District.—District in the Delhi Division of the Punjab lying between 29° 11′ and 30° 15′ N. and 76° 11′ and 77° 17′ E., with an area of 3,153 square miles, including 36 outlying villages scattered throughout the eastern part of the State of Patiāla. The District is bounded on the north by Patiāla State and Ambāla District; on the east by the Jumna, which separates it from the Districts of Sahāranpur, Muzaffarnagar, and Meerut in the United Provinces: on the south by the Punjab Districts of Delhi and Rohtak; and on the west by the States of Patiāla and Jīnd. It is divided into two parts by the low ridge which forms the watershed between the Indian Ocean and the Bay of Bengal. To the east of this ridge along the Jumna lies the

Physical aspects.

khādar, a strip of low-lying land from 5 to 10 miles wide; though it is not so thickly wooded as the rest of the District, date-palms abound, and in places a thick jungle skirts the river bank. West of the ridge lies the *bāngar*, an upland plain watered throughout by the Western Jumna Canal, and stretching parallel to the *khādar* for the whole length of the District. These two tracts fill up practically the whole of the southern *tahsīl* of Pānīpat; but in Karnāl and Kaithal, the central *tahsīls*, the *bāngar* rises with a perceptible step into the Nardak[1], a high and once arid country, now traversed by the Sirsa branch of the Western Jumna Canal. In the north of the District nearly the whole of Thānesar and the northern part of the Kaithal *tahsīl* are intersected by mountain torrents which drain the Lower Himālayas, and include large tracts of wild country covered with forests of *dhāk* (*Butea frondosa*).

The Jumna forms the entire eastern boundary for a distance of 81 miles. Its bed varies from half a mile to a mile in width, of which the stream occupies only a few hundred yards in the cold season. The most important of the torrents which traverse the northern portion are

[1] The Nardak is properly another name for KURUKSHETRA, but it is extended to include all the high tract.

the GHAGGAR, with its tributaries the Umla and SARASWATĪ, the CHAUTANG, and the Mārkanda and Purān, the last an old bed of the Ghaggar. Minor drainage channels are the Nai or 'new' Nadi, the Būrhi or 'old' Nadi, and the Rākshi.

Karnāl District offers nothing of geological interest, as it is situated entirely on the alluvium. The flora of the upper Gangetic plain is well represented in the eastern portion; in the west there is an approach to the desert vegetation; while the Jumna valley produces a few temperate types, e. g. a rose, a kind of scurvy grass (*Cochlearia*), both of which are found again in Lower Bengal, and a crowfoot (*Ranunculus pennsylvanicus*), which extends to Ludhiāna, but is absent from the Himālayas. Relics of a former Deccan flora, of which a wild cotton is the most interesting, survive, especially in the neighbourhood of Thānesar. Indigenous trees, except the *dhāk*, are uncommon; in the Jumna *khādar* a low palm abounds, which is often taken for a wild form of the date-palm, but is almost certainly a distinct species.

The Nardak was a favourite hunting-ground of the Mughal emperors, and as late as 1827 Archer says that lions were sometimes seen within 20 miles of Karnāl, while tigers were exceedingly common. Now, however, even the leopard is found only rarely, but wolves are still common. Antelope, *nīlgai*, 'ravine deer' (Indian gazelle), and hog deer are fairly plentiful where there is suitable cover. Small game is abundant.

Fever is particularly prevalent in the Naili (Nāli) tract, flooded by the Saraswatī, and in the canal-irrigated portions of the District. Owing to the faulty alignment of the canal and the swamping caused thereby, fever used to be terribly prevalent, and in consequence the cantonments were removed from Karnāl town; but recent improvements have greatly diminished the evil. The climate of Kaithal resembles that of the plains of the Punjab proper, but the Jumna *tahsīls* are not subject to the same extremes of heat and cold.

The annual rainfall averages 30 inches at Karnāl, 23 at Pānīpat, and 18 at Kaithal, rapidly decreasing as one goes west or south. The *khādar* receives the most plentiful and frequent rain, as many local showers follow the bed of the river. Of the rainfall at Karnāl, 27.4 inches fall in the summer months and 2.4 in the winter.

History.

The early legendary history of the District will be found in the account of KURUKSHETRA or the holy plain of the Hindus, which occupies its north-western portion. The number of Indo-Scythian coins found at Polar on the Saraswatī would seem to show that about the beginning of the Christian era the District was included in the Indo-Scythian empire. In or about A. D. 400 it was traversed by the Chinese pilgrim Fa Hian and in 639 by Hiuen Tsiang, the latter finding a flourishing kingdom with its capital at Thānesar. Though Thānesar was sacked by Mahmūd of Ghazni in

1014, the country remained under Hindu rule until the defeat of Prithwī Rāj at Tirāwari in 1192. Thereafter it was more or less firmly attached to Delhi till after the invasion of Tīmūr, who marched through it on his way to the capital. It then belonged, first to the ruler of Sāmāna, and then to the Lodī kings of the Punjab, and during the century and a half that separated Akbar from Tīmūr was the scene of numerous battles, of which the most important were two fought at PĀNĪPAT. For two centuries Karnāl enjoyed peace under the Mughals, broken only by the raid of Ibrāhīm Husain Mirza in 1573, the flight of prince Khusrū through the District in 1606, and the incursion of Banda Bairāgi in 1709. During this period a canal was constructed from the Jumna and the imperial road put in repair. In 1738 Nādir Shāh defeated Muhammad Shāh near Karnāl, and in 1761 occurred the third great battle of PĀNĪPAT, in which the Marāthās were routed by the Afghān army. A terrible period of anarchy followed, during which the tract formed a sort of no-man's-land between the Sikh and Marāthā powers, coveted by both but protected by neither, and the prey of every freebooter that chanced to come that way. On annexation, in 1803, the greater part of the country was held by Sikh chiefs or by confederacies of Sikh horsemen; and the District was gradually formed out of their territories as they escheated. The most important were the petty principalities of Kaithal, Thānesar, and Lādwa, of which the first two lapsed between 1832 and 1850, while Lādwa was confiscated owing to the conduct of its chief during the first Sikh War. In 1849 the District of Thānesar was formed, but in 1862 it was broken up into the two Districts of Ambāla and Karnāl. During the Mutiny there was a good deal of disorder, but no serious outbreak occurred. Great assistance was given by the Rājās of Patiāla and Jīnd in preserving order. The Pehowa *thāna* was transferred from Ambāla to the Kaithal *tahsīl* of the District in 1888, and the rest of the Pipli *tahsīl* (now Thānesar) was added to it in 1897.

The chief relics of antiquity are to be found at KARNĀL, PĀNĪPAT, THĀNESAR, and PEHOWA. At the village of Sītā Mai in the Nardak is a very ancient shrine of Sītā, and several of the great *sarais* built along the old imperial road still remain.

Population.

The District contains 7 towns and 1,383 villages. Its population at the last three enumerations was: (1881) 820,041, (1891) 861,160, and (1901) 883,225. It increased by 2·6 per cent. during the last decade, the increase being greatest in the Pānīpat *tahsīl* and least in Karnāl. In the Thānesar *tahsīl* the population decreased 0·9 per cent. in the twenty years ending 1901, owing to the unhealthiness of the tract; while Kaithal increased by 20 per cent. in the same period, owing to the development of canal-irrigation. The District is divided into the four *tahsīls* of KARNĀL, PĀNĪPAT, KAITHAL,

and THĀNESAR, the head-quarters of each being at the place from which it is named. The chief towns are the municipalities of KARNĀL (the District head-quarters), PĀNĪPAT, KAITHAL, SHAHĀBĀD, THĀNESAR, and LĀDWA.

The following table gives the chief statistics of population in 1901:—

Tahsīl	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Karnāl	836	1	380	248,544	297.3	+ 2.9	6,117
Thānesar	559	3	418	173,208	309.8	− 2.1	4,361
Pānīpat	462	1	172	196,284	424.9	+ 6.2	6,377
Kaithal	1,288	2	413	265,189	205.9	+ 3.0	4,340
District total	3,153	7	1,383	883,225	280.1	+ 2.6	21,195

NOTE.—The figures for the areas of *tahsīls* are taken from revenue returns. The total District area is that given in the *Census Report*.

Hindus number 623,597, or over 70 per cent. of the total. Monastic communities of Bairāgīs own a good deal of land and exercise considerable influence in the District. Muhammadans (241,412) form 27 per cent. of the population. The Saiyids of the District belong to the Shiah organization known as the Bārā Sādāt, which was founded by Saiyid Abdul Farsh Wasīti, a follower of Mahmūd of Ghazni. Sikhs number 12,294. Hindī is spoken by 96 per cent. of the population, and Punjābi in the scattered villages surrounded by Patiāla territory.

The Jāts or Jats are the most numerous tribe, numbering 120,000, or 14 per cent. of the total. They own 15½ per cent. of the land, and are mostly Hindus, only 8,000 being Sikhs and 3,000 Muhammadans. Their principal clans are the Ghatwāl, Deswāl, Sindhu, Pawānia, Mān, Katkhar, and Jaglān. The Rājputs (83,000) own 32 per cent. of the land; 67,000 are Muhammadans, known as Ranghars. Their principal clans are the Chauhān, Mandhār, Ghorewāha, and Tonwar. The Rors (42,000) own 17½ per cent. and are almost all Hindus; they seem originally to have held their lands as dependants of the Rājputs. Gūjars (30,000) are mostly Hindus, though 8,000 are Muhammadans. Their reputation is no better here than in other parts of the Division. The Tagās (4,000) claim to be a Brāhman race, which has abandoned the priestly profession and taken to agriculture; half of them in this District are Muhammadans. Of Brāhmans (71,000), the Biās or Gujrāti and the Dakaut are important and interesting clans. The Saiyids (6,000) trace their descent from settlers left by Mahmūd, Tīmūr, and other Muhammadan invaders. Of the Shaikhs (19,000),

besides the few properly so called and the large number of converts who have taken that name, there are in many villages one or two families of a menial tribe from which the village watchmen are drawn, who are said to be the relics of the old policy of the emperors of settling one or two Muhammadans in every village. The Mālis (26,000) have of late years immigrated in considerable numbers into the District, especially the irrigable tracts of the Thānesar *tahsīl*, where they have purchased estates. Kambohs number 14,000. Of the commercial classes, the chief are the Baniās (52,000). Among the menial classes may be mentioned the Chamārs (leather-workers, 79,000), Chūhrās (scavengers, 45,000), Jhīnwars (water-carriers, 44,000), Kumhārs (potters, 19,000), and Tarkhāns (carpenters, 20,000). About 58 per cent. of the population are supported by agriculture, 19 are industrial, 3 commercial, and 2 professional.

There is a curious division of the non-Rājput tribes into the Dehia and Haulānia factions, apparently dating from a time when the Haulānias under the leadership of the Ghatwāl Jāts were called in by one of the emperors to help to coerce the Mandhār Rājputs, and were opposed by the Dehia Jāts, who from jealousy of the Ghatwāl supremacy joined the Mandhārs. The leading families of the District are those of the Nawāb of Kunjpura, the Mandals of Karnāl, and the Bhais of Arnauli and Siddhuwāl.

The Society for the Propagation of the Gospel carries on mission work at Karnāl, Kaithal, and Pānīpat. Its operations include *zanāna* teaching, girls' schools, and a hospital and dispensary for women and children. There are also Methodist Episcopal missions at Karnāl and Pānīpat, and a Presbyterian Mission at Thānesar (founded in 1895) and Kaithal, to which the village of Santokh Mājra has been leased for a Christian colony. In 1901 the District contained 225 native Christians.

Agriculture.

The soil of the *khādar* is light, and water lies close to the surface. The Jumna floods are, however, not fertilizing, and the best lands are those which lie beyond their reach. The eastern *bāngar* is almost entirely watered by the Western Jumna Canal; the soil is a fertile and easily worked loam, and the tract forms for the most part a sheet of cultivation. The soil of the Kaithal *bāngar* is a strong intractable loam, chiefly irrigated by the new Sirsa branch of the Western Jumna Canal, which also supplies most of the Kaithal Nardak. The Thānesar *tahsīl* is a rich alluvial tract watered by the Mārkanda and Umla, but in the flooded tracts crops are very precarious, owing to the uncertainty of the floods. On the Saraswatī two-thirds of the crops belong to the spring harvest, chiefly gram; on the Umla coarse rice is often the only crop.

The District is held almost entirely by small peasant proprietors,

large estates covering only about 160 square miles and lands leased from Government 4,000 acres.

The area for which details are available from the revenue record of 1903–4 is 3,147 square miles, as shown in the following table:—

Tahsil.	Total.	Cultivated.	Irrigated.	Cultivable waste
Karnāl	838	450	164	263
Thānesar	559	335	37	151
Pānīpat	461	288	192	74
Kaithal	1,289	724	208	416
Total	3,147	1,797	601	904

The staple products of the spring harvest are wheat and gram, sown on 338 and 265 square miles respectively in 1903–4. Barley covered only 19 square miles. In the autumn harvest great millet covered 256 square miles, and rice and spiked millet 97 and 94 square miles respectively. Cotton covered 66 square miles, maize 72, and sugar-cane 30.

During the thirteen years ending 1904, the cultivated area rose from 1,637 square miles to more than 1,797, or by 10 per cent., the increase being chiefly due to the extension of canal-irrigation. This has been accompanied by an extended cultivation of maize, cotton, and sugar-cane, as well as of the more valuable spring crops; and the use of manure is said to be increasing. Loans for the construction of wells are fairly popular. In the five years ending 1903–4, Rs. 57,000 was advanced under the Land Improvement Loans Act, and 2 lakhs for the purchase of bullocks and seed.

Cattle-raising used to play an important part in the economy of the Nardak before the construction of the Sirsa canal, and the cattle of the District are still noted for their excellence. The local breed of horses is of no particular importance. A remount dépôt, established at Karnāl in 1889, was abolished in 1902, and its lands are now used as a military grass farm. The District board maintains three horse and five donkey stallions. Large flocks of goats and sheep are kept in parts, the sheep being all of the small black-tailed breed. There is a fine breed of pigs at Karnāl, dating from the time of the old cantonment.

Of the total area cultivated in 1903–4, 601 square miles, or 33 per cent., were classed as irrigated. Of this area, 230 square miles were irrigated from wells, 364 square miles from canals, 32 acres from wells and canals, and 4,581 acres from streams and tanks. The District possessed 10,931 masonry wells, besides 223 unbricked wells, lever wells, and water-lifts. In the *khādar*, although little irrigation is

necessary, wells worked by Persian wheels are numerous. The new main line of the WESTERN JUMNA CANAL enters the Thānesar *tahsīl*, and within this District gives off the Sirsa, Hānsi, and New Delhi branches, which irrigate the greater portion of the Nardak and *bāngar*, except in Thānesar, where the percolation from the main canal and the stoppage of the natural drainage keep the land so moist that it suffers from excess of water rather than from drought. The total area irrigated from the Western Jumna Canal is 2,493 acres. The *bāngar* in the Kaithal *tahsīl* is also supplied by the Saraswatī canal (an inundation canal made and worked by the District board), and some of the Nardak villages are also watered by floods from the Chautang. The few wells in these tracts are on the rope-and-bucket system. The northern part of the District is irrigated by floods from the hill torrents, and for the most part suffers from capricious water-supply, being waterlogged one year and parched the next. Except in the more favoured tracts, wells are liable to be destroyed by floods and are little used. The villages scattered through Patiāla territory are irrigated from the Sirhind Canal.

The District contains 17 tracts of unclassed forest, with a total area of 24 square miles, in charge of the Deputy-Commissioner; but these are not true forests, being covered only with scrub and small trees. About 2·6 square miles of 'reserved' forest are under the Military department.

Sal-ammoniac has from ancient times been manufactured by the potters of the Kaithal *tahsīl*. About 84 tons, valued at Rs. 3,400, are produced annually, and sold to merchants, who mostly export it. It is prepared by burning bricks made of the dirty clay found in certain ponds, and subjecting the substance that exudes from them to sublimation in closed vessels. The District has four saltpetre refineries. The only other mineral product is *kankar*, or nodular limestone.

Trade and communications.

Karnāl town used to have a name for shoe-making, but the industry is said to be declining from want of capital. Pānīpat is famous for glass-blowing, the chief product being silvered globes which, when broken up, are used for mirror-covered walls, or sewn on *phulkāris*; the glass retorts used in the manufacture of sal-ammoniac are also made. The town is noted for its manufacture of brass vessels, small fancy wares in various metals, and silver beads. The District possesses three cotton-ginning factories, at Pānīpat, Kaithal, and Dhātrat; a cotton-press at Pānīpat; and two combined ginning and pressing factories, at Pānīpat and Kaithal. The total number of employés in 1904 was 702. Silver-work and musical instruments are made at Shāhābād. Some good lacquered woodwork is also produced.

The chief exports are wheat, cotton, gram, fine rice, *ghī*, brass

vessels, glass, sal-ammoniac, and saltpetre; and the chief imports are salt, oil and oilseeds, iron, and piece-goods. Cotton and wheat go chiefly to Delhi and Ambāla; *ghi* and hides to Delhi; oil and oilseeds come from the Punjab and the Doāb; timber from Ambāla; iron and piece-goods from Delhi; and salt from Bhiwāni, Delhi, and Ambāla. Kārnal town and Pānīpat on the Delhi-Umballa-Kālka Railway are the chief marts, and a good deal of trade goes through Kaithal, which is on a branch of the Southern Punjab Railway. The local trade is principally conducted through the village dealers; but a very considerable traffic is carried on by the cultivators themselves, especially by Jāts from Rohtak, who in the hot season earn a good deal by plying their carts for hire.

The Delhi-Umballa-Kālka Railway runs through the District side by side with the grand trunk road, and Kaithal is the terminus of a branch of the Southern Punjab Railway. The new main line and the Delhi and Hānsi branches of the Western Jumna Canal are navigable, as is also the Jumna during the rains. The District has 145 miles of metalled roads, and 684 miles of unmetalled roads, of which 129 miles of metalled and 67 of unmetalled roads are under the Public Works department, the rest being maintained by the District board. Metalled roads connect Karnāl town and Kaithal, Thānesar and Lādwa, and the grand trunk road traverses the District from north to south; but the unmetalled roads are bad, especially in the Nardak, and in the flooded tract bordering on the Saraswatī and Ghaggar the tracks are often impassable for weeks together during the rains.

Famine.

Including the *chālīsa* famine of 1783, the District has been visited by famine thirteen times in 120 years, one of the most terrible perhaps being that of 1833. Relief works seem first to have been established in the famine of 1861, when 22,237 persons were relieved in one month. In 1869 the famine was more severe in Karnāl than in any other part of the Punjab, and hundreds of people were reduced to semi-starvation. The expenditure was 1·7 lakhs, and the highest daily average of persons relieved was 13,934. Cattle to the number of 65,000 died. From 1875 to 1877 there was not a single good harvest, and, though the scarcity hardly deepened into famine, the cattle suffered terribly. There was another grass famine in 1883-4. In 1896–7 the highest daily average relieved was 12,301, and the expenditure barely 2 lakhs. The areas affected were the Nardak tracts of Karnāl and Kaithal and the Naili tract of Kaithal. In 1899–1900 the Nardak in Karnāl and part of that in Kaithal were protected by the Nardak irrigation channel, constructed as a relief work in 1897; the tracts affected were chiefly the Naili and *bāngar* tracts of Kaithal and parts of Thānesar. The highest daily average relieved was 14,075, and the expenditure was 2·6 lakhs.

The District is divided into the four *tahsīls* of KARNĀL, PĀNĪPAT, THĀNESAR, and KAITHAL, each under a *tahsīldār* and a *naib-tahsīldār*. In the last, the sub-*tahsīl* of Gula is also in charge of a *naib-tahsīldār*. The *tahsīl* of Kaithal forms a subdivision. The Deputy-Commissioner holds executive charge of the District, aided by three Assistant or Extra-Assistant Commissioners, of whom one is subdivisional officer in charge of Kaithal and one in charge of the District treasury.

Administration.

The Deputy-Commissioner as District Magistrate is responsible for the criminal justice of the District, and civil judicial work is under a District Judge. Both officers are supervised by the Divisional and Sessions Judge of the Delhi Civil Division. There is one Munsif, who sits at head-quarters. There are also six honorary magistrates. Cattle-stealing, the normal crime of the District, is now less prevalent than formerly, owing to the increase of cultivation made possible by the development of the canals. Formerly heads of families of respectable birth would demur to giving a daughter in marriage to a man who had not proved his ability to support a family by cattle-lifting.

The tract which passed to the British in 1803, and formed part of the old Pānīpat District, was summarily assessed in the years 1817–24, with the exception of the estates assigned to the Mandal family in exchange for the lands they held in the United Provinces. In accordance with the spirit of the time, the summary settlement was oppressive, and the methods of assessment and collection were vexatious and extortionate; a revision of assessments was necessitated by the famine of 1824, and by degrees a more reasonable system was evolved. The regular settlement, made in 1842, was both moderate and fairly distributed. In the *khādar* the assessment on the whole worked well; in the *bāngar* the deterioration of soil caused by the canal brought absolute ruin to many villages, and in 1859–60 large reductions of revenue were made and principles laid down for annual relief to be afforded when necessary. Meanwhile, in the Mandal estate, the assignees struggled to realize their revenue in kind from a lawless and independent Rājput peasantry till 1847, when their oppression and mismanagement necessitated the tract being brought under settlement. The assessment was revised in 1852 and again in 1856. The revised settlement of 1872–80 comprised both these tracts; the revenue rate for irrigated land varied from Rs. 1–14 to Rs. 2–14, and for unirrigated land from 8 annas to Rs. 1-12; pasture was rated at 8 pies an acre; and canal lands were assessed at 'dry' rates varying from Rs. 1–5 to Rs. 1–13.

The rest of the District, comprising the *tahsīls* of Kaithal, Thānesar, and the Indri tract of Karnāl, formed part of the territories of the Cis-Sutlej chiefs, who were taken under protection by the proclamation

of 1809. These territories as they escheated were summarily assessed. Thānesar and Indri were regularly settled in 1848–56 and Kaithal in 1853–6. The whole of this portion of the District came under the Karnāl-Ambāla revision in 1882–9. The average assessment on 'dry' land is R. 0–14–3 (maximum Rs. 1–6, minimum R. 0–6–6), and on 'wet' land Rs. 2–14 (maximum Rs. 3–12, minimum Rs. 2). The total demand for 1903–4, including cesses, was 12 lakhs. The average size of a holding cultivated by the owner is 5·3 acres. The whole District came under settlement in 1904, the present assessment expiring in 1908.

The collections of land revenue alone and of total revenue are shown below, in thousands of rupees:—

	1880–1.	1890–1.	1900–1.	1903–4.
Land revenue . .	6,36	6,95	8,20	8,29
Total revenue . .	7,65	8,88	12,68	13,45

The District contains six municipalities: KARNĀL, PĀNĪPAT, KAITHAL, SHĀHĀBĀD, THĀNESAR, and LĀDWA. Outside these, local affairs are managed by the District board, whose income amounted to nearly 1¼ lakhs in 1903–4. The expenditure in the same year was 1·2 lakhs, education forming the largest item.

The regular police force consists of 683 of all ranks, including 147 municipal police, under a Superintendent, assisted by 4 inspectors. Village watchmen number 1,540. The District contains 22 police stations, 1 outpost, and 5 road-posts. The Sānsis, Balochs, and Tagās are proclaimed under the Criminal Tribes Act; and 55 Sānsis, 447 Balochs, and 237 Tagās were registered in 1903 under the Act. The District jail at head-quarters has accommodation for 155 prisoners.

Karnāl is the most backward District in the Province in the matter of education, and in 1901 the proportion of literate persons was only 2·4 per cent (4·3 males and 0·1 females), as compared with 3·6 for the whole Province. The number of pupils under instruction was: 1,961 in 1880–1, 2,242 in 1890–1, 5,902 in 1900–1, and 5,365 in 1903–4. In the last year the District contained 9 secondary and 90 primary (public) schools, besides 12 advanced and 62 elementary (private) schools, with 53 girls in the public and 72 in the private schools. The only high school is at Karnāl. The indigenous Arabic school at Pānīpat, supported by the voluntary contributions of wealthy Muhammadans, is attended by about 50 boys, chiefly from the middle-class Muhammadan families of the town. The District has three primary schools for girls, and the ladies of the Karnāl branch of the Zanāna Mission teach women and children in the town. The total

expenditure on education in 1903–4 was Rs. 47,000, the greater part of which was met from Local funds, though Government contributed nearly Rs. 1,600, and fees brought in Rs. 10,000.

Besides the Karnāl civil hospital the District has 9 dispensaries, one at Karnāl and 8 at out-stations, at which 117,370 out-patients and 1,626 in-patients were treated in 1904, and 6,849 operations performed. The income and expenditure amounted to Rs. 21,000, Local and municipal funds contributing Rs. 11,000 and Rs. 9,000 respectively. The Society for the Propagation of the Gospel also maintains a female hospital at Karnāl.

The number of successful vaccinations in 1903-4 was 20,090, representing 23 per 1,000 of population.

[A. Kensington, *Customary Law of Ambāla District* (1893) (for the Thānesar *tahsīl*); J. M. Douie, *District Gazetteer* (1890), *Settlement Report of Karnāl-Ambāla* (1891), and *Riwāj-i-ām of Tahsīl Kaithal and Pargana Indri, District Karnāl* (1892); D. C. J. Ibbetson, *Settlement Report of the Pānīpat Tahsīl and Karnāl Pargana* (1883).]

Karnāl Tahsīl.—Central *tahsīl* of Karnāl District, Punjab, lying between 29° 26′ and 30° 0′ N. and 76° 40′ and 77° 13′ E., on the west bank of the Jumna, with an area of 838 square miles. The population in 1901 was 248,544, compared with 241,369 in 1891. It contains the town of KARNAL (population, 23,559), the head-quarters; and 380 villages. The land revenue and cesses in 1903–4 amounted to 3·2 lakhs. On the east lie the Jumna lowlands, fertile but unhealthy, and varying in width from 5 to 10 miles. The western boundary of this tract is the old high bank of the Jumna, and from the crest of this bank the country slopes imperceptibly away into the Nardak. The upland portion of the *tahsīl* is irrigated by the Western Jumna Canal; but in the Nardak the people have not entirely abandoned their pastoral traditions, and still retain ample grazing-grounds for their cattle.

Karnāl Town.—Head-quarters of the District and *tahsīl* of Karnāl, Punjab, situated in 29° 41′ N. and 76° 59′ E., on the old bank of the Jumna, about 7 miles from the present course of that river, and on the Delhi-Umballa-Kālka Railway; distant 1,030 miles by rail from Calcutta, 1,056 from Bombay, and 895 from Karāchi. Population (1901), 23,559. Its name is derived from Karna, the rival of Arjuna in the epic of the Mahābhārata, by whom it is said to have been founded. It would seem to have been a place of little importance in early historical times, as no mention of it occurs until towards the end of the Pathān period. Karnāl was plundered in 1573 by Ibrāhīm Husain Mirza in his revolt against Akbar, and its neighbourhood laid waste by Banda Bairāgi in 1709. In 1739 it was the scene of the defeat of Muhammad Shāh by Nādir Shāh. After the fall of Sirhind in 1763 the town was seized by Gajpat

Singh, Rājā of Jīnd, but in 1775 it was recovered by Najaf Khān, governor of Delhi. It again fell into the hands of Gajpat Singh, but his son Bhāg Singh lost it to the Marāthās in 1787, and it was subsequently made over by them to George Thomas. It then came into the hands of Gurdit Singh of Lādwa, from whom the British took it in 1805. A cantonment was formed at Karnāl, which was abandoned in 1841 owing to the unhealthiness of the station. The place is still unhealthy, though drainage and sanitation have done much to improve its condition. There is a fine marble tomb, built by the emperor Ghiyās-ud-dīn to the memory of the saint Bū-Alī Kalandar. The Society for the Propagation of the Gospel has a mission at Karnāl. The municipality was created in 1867. The income and expenditure during the ten years ending 1902-3 averaged Rs. 32,500 and Rs. 32,100 respectively. The income in 1903-4 was Rs. 33,800, mainly derived from octroi; and the expenditure was Rs. 33,500. The chief manufactures are country cloth for local consumption, and shoes. The principal educational institution is the Anglo-vernacular high school, managed by the Educational department. There is a civil hospital, with a branch in the town. The Society for the Propagation of the Gospel also maintains a female hospital and dispensary.

Karnāla (or Funnel Hill).—Fort and hill in the Panvel *tāluka* of Kolāba District, Bombay, situated in 18° 53′ N. and 73° 7′ E., a few miles north-west of the Vegavati river, and 8 miles south of Panvel; elevation 1,560 feet above sea-level. Population (1901), 1,327. Karnāla commands the high road between the Bor pass and the Panvel and Apta rivers. The hill has an upper and lower fort. In the centre of the upper fort is the 'funnel,' an almost inaccessible basalt pillar about 125 feet high, locally known as the Pāndu's tower. From the south-west of the hill can be seen the island-studded harbour of Bombay.

The fort was often taken and retaken during the turbulent period of Indian history. Under the Muhammadans, Karnāla was garrisoned to overawe the North Konkan. Troops from Ahmadnagar took it in 1540. The Portuguese captured it soon after, but gave it up on receiving a ransom of Rs. 17,500 a year. Sivajī, the Marāthā leader, seized it in 1670, driving out the Mughals. On the death of Sivajī, Karnāla was recaptured by Aurangzeb's generals, and was held by the Mughals till at least 1735. Shortly afterwards it must have again come into the hands of the Marāthās, for in 1740 the Peshwā's power was established over the whole of the Deccan. In 1818 the fort was captured, and passed into British possession, together with the whole remaining territory held by the Peshwā. It is now in ruins.

Karnāli.—River of Nepāl and the United Provinces. *See* KAURIĀLA.

Karnāli.—Village in the Baroda *prānt*, Baroda State, situated in

21° 59′ N. and 73° 28′ E., on the right bank of the Narbadā at its junction with the Orsang river. Population (1901), 1,126. Thousands of pilgrims repair annually to this holy place in order to perform their ablutions in the Narbadā.

Karnaphuli.—River of Eastern Bengal and Assam. It rises in a lofty range of hills beyond the border of the Chittagong Hill Tracts, in 22° 53′ N. and 92° 27′ E., and, after following a generally south-westerly course of 121 miles, falls into the Bay of Bengal in 22° 12′ N. and 91° 47′ E., 12 miles below the town and port of Chittagong, which is situated on its right bank. As far up as Chittagong it is navigable by sea-going vessels, and by shallow-draught steamers as high as RĀNGĀMĀTI, the head-quarters of the Chittagong Hill Tracts. Large native boats go up as high as Kāsālang, while small craft ply 14 miles farther up to the Barkal rapids. In the Hill Tracts it is known as the Kynsa Khyoung. The chief tributaries are the Kāsālang, Chingri, Kāptai, and Rankhiang rivers in the Hill Tracts, and the Haldā in Chittagong District; the latter empties itself into the main river from the north, and is navigable by native boats for 24 miles throughout the year. Besides those already mentioned, the principal river-side villages are Chandraghonā and Rangonia. The Karnaphuli is largely used for floating cotton and forest produce from the Hill Tracts to Chittagong. The approaches to the mouth are lit by lighthouses at Kutubdiā and Norman's Point, and the channels are buoyed by the Port Commissioners of Chittagong.

Karnaprayāg.—One of the five sacred confluences of the Alaknandā, where this river is joined by the Pindar (see PINDARĪ) in Garhwāl District, United Provinces. The village is situated at a height of 2,300 feet above the sea, in 30° 16′ N. and 79° 15′ E. Population (1901), 243. It contains a number of temples and also a dispensary, and during the summer a police station.

Karna Suvarna.—Ancient kingdom in Bengal, which lay west of the Bhāgīrathi river, and comprised the modern Districts of Burdwān, Bānkurā, Western Murshidābād, and Hooghly. The best-known king was Sasānka or Narendra, the last of the Guptas, who was a fanatical worshipper of Siva. He invaded Magadha, and cut down the sacred *bodhi* tree, early in the seventh century. The capital of this kingdom was probably at RĀNGĀMĀTI in Murshidābād District.

Karnātak.—Tract in Peninsular India. *See* CARNATIC.

Karnūl.—District, subdivision, and town in Madras. *See* KURNOOL.

Kārol.—Petty State in KĀTHIĀWĀR, Bombay.

Karond.—Native State in Bengal. *See* KĀLĀHANDĪ.

Karor.—Former name of the *pargana* and *tahsīl*, now called Bareilly. *See* BAREILLY TAHSĪL.

Karor.—Town in Multān District, Punjab. *See* KAHROR.

Karor Lāl Isa (*Kahror*).—Town in the Leiah *tahsīl* of Miānwāli District, Punjab, situated in 31° 13′ N. and 70° 57′ E., on the high bank of the Indus east of that river. Population (1901), 3,243. Founded by Makhdūm Lāl Isa, Kureshi, a descendant of Bahāwal Hakk, the saint of Multān, in the fifteenth century, the town still preserves the massive tomb of its founder, and a large fair is held yearly in his honour. It is first mentioned in history as included in the government of Multān under Sultān Husain in 1469. The municipality was created in 1887. The income during the ten years ending 1902–3 averaged Rs. 3,600, and the expenditure Rs. 3,900. The income in 1903–4 was Rs. 3,400, chiefly derived from octroi; and the expenditure was Rs. 3,600. The town contains a dispensary, a municipal board school (primary), a private Anglo-vernacular middle school, and two municipal girls' schools.

Karsiāng.—Subdivision and town in Darjeeling District, Bengal *See* KURSEONG.

Kartārpur.—Town in the District and *tahsīl* of Jullundur, Punjab, situated in 31° 26′ N. and 75° 30′ E., on the North-Western Railway and grand trunk road, 9 miles from Jullundur town. Population (1901), 10,840. Founded by Arjun, the fifth Sikh Gurū, it is a place of great sanctity, as the seat of the line of Gurūs descended from him, and as possessing his original Adi Granth or scripture. It was burnt by Ahmad Shāh in 1756. Kartārpur is a flourishing grain mart, with a market outside octroi limits. Chairs, boxes, tables, and native flutes are made; also cotton twill (*sūsī*). The cantonment established here after the first Sikh War was abolished in 1854. The municipality was created in 1867 The income during the ten years ending 1902–3 averaged Rs. 7,500, and the expenditure Rs. 6,900. In 1903–4 the income was Rs. 7,300, mainly from octroi; and the expenditure was Rs. 10,600. The town has an Anglo-vernacular middle school, maintained by the municipality, and a Government dispensary.

Karunguli.—Village in the Madurāntakam *tāluk* of Chingleput District, Madras, situated in 12° 32′ N. and 79° 54′ E., on the South Indian Railway and on the southern trunk road, 48 miles from Madras city. Population (1901), 4,065. It was the head-quarters of the District from 1705 to 1825, and subsequently continued for some years to be the head-quarters of a *tāluk*. Karunguli fort was occupied as a strategic point during the wars between the English and the French, being regarded as an outpost of Chingleput, from which it is 15 miles distant to the south-west. These two places, with Wandiwāsh and Uttaramerūr, formed a sort of quadrilateral on the line of attack between the seats of the two Governments of Madras and Pondicherry. As early as 1755 it was a point of dispute. In 1757 it was evacuated by the English in the face of advancing French troops. The following year the English attempted

to recover it by surprise, but were repulsed with loss, a failure which was repeated in 1759. But some months later Colonel Coote, after a few days' bombardment, captured the fort. This was the first decisive action in the successful campaign of 1759-60, which led to the victory at Wandiwāsh. The circumference of the fort is 1,500 yards, enclosing the remains of what were apparently huge granaries for the storage of grain, the tribute to the Muhammadan government out of the produce of the neighbourhood. The Karunguli tank, which is fed from the overflow of the Madurāntakam tank, usually receives a plentiful supply of water. A travellers' bungalow stands in the village, a handsome old building in a grove of fine mango-trees.

Karūr Tāluk.—South-eastern *tāluk* of Coimbatore District, Madras, lying between 10° 38′ and 11° 6′ N. and 77° 45′ and 78° 14′ E., with an area of 612 square miles. It is an open and undulating plain, with no hills or forests of note, bounded on the north by the Cauvery river and traversed by the Amarāvati. It is poorly wooded and suffers from an unusually trying hot season. It has one town, the municipality of KARŪR (population, 12,769), the head-quarters; and 95 villages. The population in 1901 was 220,843, compared with 211,794 in 1891, the increase having been slower than elsewhere in the District. The demand for land revenue and cesses in 1903-4 amounted to Rs. 3,49,000. The soil is mostly of an inferior red or grey variety, and is generally lightly assessed. The area irrigated by channels is larger than in any *tāluk* except Satyamangalam. These lead from the Amarāvati and the Cauvery, and this is the first *tāluk* in the Presidency in which the water of the latter is used to any considerable extent. The rainfall (averaging 26 inches annually) is fairly plentiful and regular, and the crops are generally good. *Cambu* is by far the most common cereal.

Karūr Town.—Head-quarters of the *tāluk* of the same name in Coimbatore District, Madras, situated in 10° 58′ N. and 78° 6′ E., on the South Indian Railway, 48 miles from Trichinopoly, and on the Amarāvati river not far from its junction with the Cauvery. Population (1901), 12,769. The town is called Tiruvānilai or Pasupati ('the place of the sacred cow') in vernacular writings. The name Karūr means 'embryo town,' and is said to have been given because Brahmā began his work of creation here. For the same reason it is often called Brahmapurī in legendary records. It was apparently a place of some importance as far back as the early centuries of the Christian era, for coins of the emperors Augustus, Tiberius, and Claudius were found near by in 1806. Situated near the point where the territories of the rival Chera, Chola, and Pāndya dynasties met, it probably played a part in their ancient struggles. On the dissolution of the Vijayanagar empire in 1565, Karūr fell under the Naiks of Madura; but it was frequently attacked and occupied by the Mysore armies, and towards

the end of the seventeenth century it was finally annexed to the latter kingdom and became its most important frontier post. In 1639 the Jesuits established a mission here. In later years the place constantly changed hands. In 1736 Chanda Sāhib besieged it unsuccessfully. In 1760 it was captured by the British, in revenge for the assistance given by Haidar to the French. Orme describes the siege in detail. Karūr was held by them till 1768, when it was retaken by Haidar, whose possession was confirmed by treaty in the following year. In 1783 Colonel Lang took and held the fort for a few months. There is a monument on the south bank of the river to the British troops who fell in this siege. It was a third time captured in 1790 by General Medows, and restored at the peace of 1792. It was garrisoned by the Company as a military station until 1801, and portions of the old fort still remain.

Karūr was formerly the head-quarters of the Sub-Collector. Besides the *tahsīldār*, a District Munsif and a stationary sub-magistrate are now stationed here. Being on the railway and at the junction of several roads, it possesses a considerable trade. Its chief drawback is its crowded site, which is surrounded entirely by rice-fields and the river. The only industry worth mention is the manufacture of brassware on a small scale. There are, however, two tanneries in the neighbourhood. The principal temple is a considerable edifice of some antiquity, containing numerous inscriptions on stone.

Karūr was constituted a municipality in 1874. During the ten years ending 1903 the annual income and expenditure averaged about Rs. 20,000. In 1903–4 the receipts and expenditure were Rs. 29,000 and 28,000 respectively, the former being chiefly derived from school fees, the house and land taxes, and tolls. It is a station of the Wesleyan Mission, which maintains two industrial schools here, one for boys and the other for girls. A drainage scheme estimated to cost Rs. 95,850 has been framed for this municipality; but its execution has been postponed pending the introduction of a proper water-supply, plans for which are still under preparation.

Kārvan.—Village in the Baroda *prānt*, Baroda State, situated in 22° 5′ N. and 73° 15′ E., with a station on the Dabhoi-Miyāgām State Railway. In olden times it was probably very important as a place of pilgrimage. The local tradition is that the sage Vishvāmitra, in consequence of a dispute with Vasishta, desired to create another Benares in this village. He therefore fashioned a thousand *lingams* and then wrestled to bring the Ganges here, till Vishnu was weary of his importunities. The god was forced to make himself visible to the saint, who then ceased from vexing him, and in return Vishnu promised that the village should be as holy as Benares. Many temples, some old, some in ruins, are to be seen at this sacred spot.

Kārvetnagar Zamīndāri.—Ancient *zamīndāri* in the north-east of North Arcot District, Madras, lying between 13° 2′ and 13° 35′ N. and 79° 14′ and 79° 49′ E. Area, 943 square miles; number of villages, 667; population (1901), 341,240. It is held on permanent tenure under a *sanad* (grant) issued by the British Government in 1802. The whole of the *zamīndāri* is hilly except the south-east; penetrating the hills run numerous picturesque ravines or *konas*, which are well wooded and fairly stocked with game. One of the most charming of these is the Sadāsiva *kona*, about 10 miles north-east of the Puttūr station on the Madras Railway. Here a perennial stream flows eastwards by a succession of cascades, by the sides of which tree-ferns and other species of water-loving plants grow in profusion. The principal streams which drain the *zamīndāri* are named after the towns of Nārāyanavanam, Nagari, and TIRUTTANI, by which they flow. They are dry except during the rains, but have excellent underground springs, the water of which is tapped by means of channels and irrigates considerable areas on both banks. The soil of the estate is fertile; but much of it is covered with hill and jungle, and three-fourths of the area is uncultivable, only about 130,000 acres being under the plough. Indigo is still largely cultivated, but of late years the market for the dye has been depressed owing to the competition of its new chemical rival. From the forests of the *zamīndāri* much fuel is exported to Madras by rail. The total *peshkash* (or permanent revenue paid to Government) is 1·7 lakhs, and the cesses in 1903–4 were an additional Rs. 50,000. The gross income of the whole estate averages between 6 and 7 lakhs, but it is heavily encumbered. Some of the villages have been sold in satisfaction of decrees of the Civil Courts and now form separate properties; and the estate is so involved in debt that it was taken under the management of the Court of Wards for a time. It has now been handed back to the proprietor. Kārvetnagar, 7 miles from Puttūr railway station, is the chief town and the residence of the *zamīndār*, who has the hereditary title of Rājā. Puttūr, Nārāyanavanam, Nagari, and Tiruttani are other important places.

Kārwār Tāluka.—North-westernmost *tāluka* of North Kanara District, Bombay, lying between 14° 44′ and 15° 4′ N. and 74° 4′ and 74° 32′ E., with an area of 281 square miles. It contains one town, KĀRWĀR (population, 16,847), the *tāluka* and District head-quarters; and 54 villages. The population in 1901 was 58,460, compared with 53,278 in 1891. The density, 208 persons per square mile, is much above the District average. The demand for land revenue in 1903–4 was 1·09 lakhs, and for cesses Rs. 7,000. The Kālīnadī flows from east to west through the centre, and as it enters the sea throws up a bar of sand impassable to any but small craft. Along both banks

of the river broad belts of rice land, broken by groves of palms and other fruit trees, stretch east to near the Western Ghāts. The soil on the plains is sandy, and near the hills is much mixed with granite. On the banks of the Kālīnadī, and along the seashore, are large tracts covered with a black alluvial deposit, charged with salt and liable to be flooded at high tides. To bring such land under tillage, a strong and costly wall must be built to keep out the sea. A heavy rainfall is required to sweeten the land, and then, without much manure and with due care, rich crops can be raised. Throughout the *tāluka* the houses are not gathered into villages, but are scattered along narrow lanes, standing in shady coco-palm gardens, some tiled and some thatched, each with its well, bathing-place, and cattle-shed. The annual rainfall is heavy, amounting at Kārwār town to nearly 110 inches.

Kārwār Town (*Kadvād*).—Head-quarters of the *tāluka* of the same name and of North Kanara District, Bombay, situated in 14° 49′ N. and 74° 8′ E., 50 miles south-east of Goa and 295 miles south-east of Bombay. Population (1901), 16,847, including suburbs. The municipality, established in 1864, had an average income during the decade ending 1901 of Rs. 13,000. In 1903-4 the income was Rs. 12,000.

Old Kārwār, on the banks of the Kālīnadī, 3 miles to the east of the new town, was once an important place of commerce. It is first mentioned in 1510 as Caribal, on the opposite side of the river to Cintacora or Chitākul. During the first half of the seventeenth century the Kārwār revenue superintendent, or *desai*, was one of the chief officers of the Bijāpur kingdom, of which it formed a part. In 1638 the fame of the pepper of Sonda induced Sir William Courten's Company to open a factory at Kārwār. In 1660 the factory was prosperous, exporting the finest muslins in Western India; the weaving country was inland to the east, at Hubli and other centres, where as many as 50,000 weavers were employed. Besides the great export of muslin, Kārwār provided pepper, cardamoms, cassia, and coarse blue cotton cloth (*dungari*). In 1665 Sivajī, the founder of the Marāthā power, exacted a contribution of Rs. 1,120 from the English. In 1673 the *faujdār*, or military governor of Kārwār, laid siege to the factory. In 1674 Sivajī burnt Kārwār town; but the English were treated civilly, and no harm was done to the factory. In 1676 the factory suffered from the exactions of local chiefs, and the establishment was withdrawn in 1679. It was restored in 1682 on a larger scale than before. In 1684 the English were nearly driven out of Kārwār, the crew of a small vessel having stolen and killed a cow. In 1685 the Portuguese stirred the *desais* of Kārwār and Sonda to revolt. During the last ten years of the seventeenth century the Dutch made every attempt to depress the English pepper trade; and in 1697 the Marāthās laid Kārwār waste.

In 1715 the old fort of Kārwār was pulled down, and Sadāshivgarh was built by the Sonda chief. The new fort seriously interfered with the safety of the English factory; and owing to the hostility of the Sonda chief, the factory was removed in 1720. The English, in spite of their efforts to regain the favour of the Sonda chiefs, were unable to obtain leave to reopen their factory at Kārwār till 1750. The Portuguese in 1752 sent a fleet and took possession of Sadāshivgarh. As the Portuguese claimed the monopoly of the Kārwār trade, and were in a position to enforce their claim, the English agent was withdrawn. In 1801 Old Kārwār was in ruins. Very few traces of it remain.

The new town dates from after the transfer of North Kanara District to the Bombay Presidency, before which it was a mere fishing village. The present town and neighbouring offices and residences are in the lands of six villages, and within the municipal limits of the town are nine villages. A proposal was strenuously urged in Bombay to connect Kārwār by a railway with the interior, so as to provide a seaport for the southern cotton Districts. Between 1867 and 1874 the hope that a railway from Kārwār to Hubli would be sanctioned raised the value of building sites at Kārwār, and led to the construction of many warehouses and dwellings. The scheme was finally abandoned in favour of the line through Portuguese territory to Marmagao. The trade of Kārwār has markedly decreased since the opening of this railway.

Kārwār is the only safe harbour between Bombay and Cochin during all seasons of the year. In the bay is a cluster of islets called the OYSTER ROCKS, on the largest of which, Devgad island, a lighthouse has been built. There are two smaller islands in the bay (138 and 120 feet above the level of the sea), which afford good shelter to native craft and small vessels during the strong north-west winds that prevail from February to April. From the Kārwār port-office, on a white flagstaff, 60 feet from the ground and 65 feet above high water, is displayed a red fixed ship's light, visible three miles; with the light bearing east-south-east a vessel can anchor in 3 to 5 fathoms. About 5 miles south-west and 2 miles from the mainland, the island of ANJIDIV rises steep from the sea, dotted with trees and the houses of its small Portuguese settlement. Coasting steamers belonging to the Bombay Steam Navigation Company call twice a week at Kārwār throughout the fair-weather season. These steamers generally make the trip between Kārwār and Bombay in thirty-six hours. The value of the trade at Kārwār port during the year 1903–4 is returned as follows: imports 3·34 lakhs and exports Rs. 82,000. Kārwār bay is remarkable for its beautiful scenery. It possesses a fine grove of casuarinas, beneath which the sea breaks picturesquely on the long stretch of white sand, from the mouth of the Kālīnadī to the sheltered inlet of Baitkal cove. Besides the chief revenue and judicial offices,

the town contains a Subordinate Judge's court, a jail, a hospital, a high school with 237 pupils, 2 middle schools, and 8 other schools.

Karwī Subdivision.—Subdivision of Bāndā District, United Provinces, consisting of the KAMĀSIN, KARWĪ, and MAU *tahsīls*.

Karwī Tahsīl.—South-eastern *tahsīl* of Bāndā District, United Provinces, conterminous with the *pargana* of Tarahuwān, lying between 24° 53′ and 25° 19′ N. and 80° 45′ and 81° 16′ E., with an area of 567 square miles. Population fell from 87,687 in 1891 to 78,410 in 1901. There are 189 villages and two towns, including KARWĪ, the *tahsīl* head-quarters (population, 7,743). The demand for land revenue in 1903-4 was Rs. 77,000, and for cesses Rs. 15,000. The density of population, 138 persons per square mile, is the lowest in the District. Roughly speaking, about half the *tahsīl* lies in the plain, while the other half is situated on a plateau between the crest of the first range of the Vindhyas and the scarp beyond which extends to the still higher plateau of Rewah. The latter portion presents beautiful scenery and is clothed with forest. Near the west the Paisunī river forms part of the border and then strikes across the *tahsīl*. In 1903-4 the area under cultivation was 126 square miles, of which only 3 were irrigated.

Karwī Town.—Head-quarters of the subdivision and *tahsīl* of the same name, in Bāndā District, United Provinces, situated in 25° 12′ N. and 80° 54′ E., near the Paisunī river and on a branch of the Great Indian Peninsula Railway. Population (1901), 7,743. Karwī was a British cantonment from 1805 to 1816; and in 1829 it became the principal residence of a Marāthā chieftain who lived in almost regal state, and built several beautiful temples and large wells. Numerous traders from the Deccan were thus attracted to Karwī. During the Mutiny, Nārāyan Rao, after the murder at Bāndā of the Joint-Magistrate of Karwī, assumed the government, and retained his independence for eight months amid the subsequent anarchy. The accumulations of his family constituted the great treasure afterwards famous as 'the Kirwee and Banda Prize Money.' The Bāra, a large building which formed the palace of Nārāyan Rao's family, was confiscated, with most of the other property, and now serves as a *tahsīli*, police station, and school. The other public buildings are a jail and dispensary. A Joint-Magistrate and an Assistant District Superintendent of police are stationed at Karwī, which also contains branches of the Society for the Propagation of the Gospel and the American Methodist Mission. The town is administered, together with the adjacent village of Tarahuwān, under Act XX of 1856. Karwī declined for a time after the Mutiny; but the railway, opened in 1899, has caused it to become the most important trade centre in the District. Cotton, grain, *ghī*, and other produce are largely exported. A cotton-gin, opened in 1900, employed 180 hands in 1903, and there is a small manufacture of

embroidered plush. There are three schools, with 170 boys and 25 girls.

Kāsalpura.—Petty State in MAHĪ KĀNTHA, Bombay.

Kāsaragod Tāluk.—Southernmost *tāluk* of South Kanara District, Madras, lying between 12° 7′ and 12° 57′ N. and 74° 52′ and 75° 26′ E., with an area of 762 square miles. It contains 114 villages. The demand for land revenue and cesses in 1903–4 amounted to Rs. 2,42,000. The population in 1901 was 231,280, compared with 210,323 in 1891, showing an increase of 10 per cent. Much of the surface consists of a bare treeless plateau; but the valleys are deep, well-watered, and very fertile, and, especially in the northern half of the *tāluk*, admirably adapted for areca cultivation. The chief products are rice, coco-nuts, and areca-nuts. In the coast villages in the south a considerable amount of tobacco is raised by the Māppilla cultivators. In eighteen survey villages adjoining Coorg and Malabar the shifting system of cultivation known as *kumri* is still carried on, the crop being usually a mixed one of hill rice, pulse, and cotton. The jungle on selected spaces on the hill slopes is cut down, usually in December, and burned when dry three or four months later. The seed is sown in the ashes, sometimes without ploughing, when the rains come, and in good years fine crops are secured with little further trouble. A catch-crop is sometimes raised the following season; and the spot is then abandoned for a period of from seven to ten years till there is sufficient fresh growth, when the process is repeated.

Kāsārghāt.—Pass in Thāna District, Bombay. *See* THALGHĀT.

Kasauli.—Hill station and cantonment in the Punjab, situated in 30° 53′ N. and 76° 58′ E., entirely surrounded by Native States, but attached for administrative purposes to the Kharar *tahsīl* of Ambāla District. It stands on the summit of the long ridge overlooking Kālka, at an elevation of 6,335 feet above the sea, and nearly 4,000 feet above Kālka, from which it is distant about 9 miles. Population (1901), 2,192. Kasauli was founded in 1842 as a military station, and now serves as a convalescent dépôt. It has during the summer months a considerable civil population, for whose accommodation hotels have been built. Owing, however, to its nearness to the plains, it is the least attractive in climate of the Punjab hill stations. The management of the station is in the hands of a Cantonment Magistrate assisted by a cantonment committee; the Cantonment Magistrate proceeds on tour for ten days in each month of the hot season, and is relieved of the charge of the treasury by the Assistant Commissioner in charge of the Rūpar subdivision. The Deputy-Commissioner of Ambāla also resides at Kasauli during part of the hot season. There is an Anglo-vernacular middle school. The Lawrence Military Asylum at Sanāwar is 3 miles away, in a portion of territory attached to Simla District. The income and

expenditure of cantonment funds during the ten years ending 1902–3 averaged Rs. 13,000.

The Pasteur Institute at Kasauli was established in 1901 for the treatment of persons bitten by rabid animals, and now treats patients from all parts of Northern India. In 1906 a central Research Institute was founded, which will provide means for the scientific study of the etiology and nature of disease in India, in addition to the preparation of curative sera for the diseases of man and the training of scientific workers. The institution is in charge of a Director, with a staff of assistants. Kasauli is also the head-quarters of the Punjab Nursing Association, and contains a dispensary. There is a brewery in the neighbourhood.

Kasbā.—Old name of JESSORE TOWN, Bengal.

Kasbā.—Village in the head-quarters subdivision of Purnea District, Bengal, situated in 25° 51′ N. and 87° 32′ E., on the road from Purnea town to Arāriā, about 9 miles from the former. Population (1901), 7,600. Kasbā, which lies on the Eastern Bengal State Railway, is the chief centre of the rice trade in Purnea District, the paddy being collected from the north of the District and the submontane portions of Darjeeling for export to Calcutta. It has also become a large centre of the jute trade, the annual sales amounting to over 10 lakhs; and a European firm has an agency there.

Kāsegaon.—Village in the Vālva *tāluka* of Sātāra District, Bombay, situated in 17° 8′ N. and 74° 14′ E., close to the Sātāra-Kolhāpur road, 11 miles south of Karād and 4 miles north of Peth. Population (1901), 5,482. This is one of the most thriving places in the *tāluka*. It is inhabited by well-to-do merchants, who traffic with the coast in local produce, chiefly tobacco, pepper, and sugar-cane. The inhabitants have an unenviable character for crime and litigiousness—mischief to crops, cattle poisoning, and arson having been very frequent for many years.

Kāsganj Tahsīl.—Northern *tahsīl* of Etah District, United Provinces, comprising the *parganas* of Ulhi, Bilrām, Pachlāna, Soron, Sidhpura, Sahāwar-Karsāna, and Faizpur-Badariā, and lying between 27° 33′ and 28° 2′ N. and 78° 29′ and 78° 59′ E., with an area of 492 square miles. Population increased from 191,625 in 1891 to 265,216 in 1901. There are 468 villages and six towns, the largest of which are KASGANJ (population, 19,686), the *tahsīl* head-quarters, SORON (12,175), and SAHĀWAR (5,079). The demand for land revenue in 1903–4 was Rs. 2,91,000, and for cesses Rs. 44,000. The new settlement will raise the demand for revenue to Rs. 3,26,000, and for cesses to Rs. 53,000. The density of population, 539 persons per square mile, is above the District average. Population increased by nearly 28 per cent. between 1891 and 1900, a higher rate of increase than in any other *tahsīl* in the

United Provinces. The *tahsīl* is bounded on the north-east by the Ganges and on the south-west by the Kālī Nadī. It thus lies entirely in the *tarai* and in the central *doāb*, which are the most precarious tracts in the District. Heavy rain in 1884–6 led to extensive water-logging, and the land which fell out of cultivation was overgrown with *kāns* (*Saccharum spontaneum*). Extensive reductions of revenue were made, and, to prevent further deterioration, the drainage was improved. The Būrhigangā, which lies below the old high bank on the southern edge of the *tarai*, has been deepened and straightened. In 1898–9 the area under cultivation was 347 square miles, of which 108 were irrigated. The *tarai* is so moist that irrigation is not usually required, and the upland area is served by the Lower Ganges Canal and its Fatehgarh branch. Wells supply about half the irrigated area.

Kāsganj Town.—Head-quarters of the *tahsīl* of the same name in Etah District, United Provinces, situated in 27° 48′ N. and 78° 39′ E., on the Cawnpore-Achhnerā Railway, and also on the road from Muttra to Bareilly. A short branch railway connects Kāsganj with Soron near the Ganges, and an extension to Bareilly is under construction. This is the chief trade centre of the District, and population is increasing: (1891) 16,050, (1901) 19,686. The town is said to have been founded by Yakūt Khān, a eunuch in the service of Muhammad Khān, Nawāb of Farrukhābād. It afterwards came into the hands of Colonel James Gardner, who was in the employ of the Marāthās, and later in British service. He raised a regiment, now known as Gardner's Horse, and acquired a large property which was dissipated by his descendants. Part of the property fell into the hands of Dilsukh Rai, once an agent to the Gardner family, and one of his descendants has built a magnificent residence near the town. Kāsganj stands on an elevated site, its drainage flowing towards the Kālī Nadī, which runs about a mile south-east of the town. A new drainage scheme has recently been completed. The town contains two fine bazars crossing each other at right angles. At the junction a fine octagonal building, consisting of shops, forms a suitable centre to the town. The chief public buildings are the town hall, dispensary, *tahsīlī*, and *munsifi*. There are also branches of the Church Missionary Society and the American Methodist Mission. Close to the railway station is a considerable colony of railway employés. The town was constituted a municipality in 1868. During the ten years ending 1901 the income and expenditure averaged Rs. 15,000. In 1903–4 the income was Rs. 22,000, chiefly derived from octroi (Rs. 16,000); and the expenditure was Rs. 23,000. Kāsganj is becoming an important centre for the collection and distribution of country produce, especially grain, sugar, and cotton. Sugar-refining is a growing industry, and there were two cotton-gins and a cotton-press which employed 788 hands in 1903, while another ginning

factory was opened in 1904. The town school has about 190 pupils, and 16 other schools aided by the municipality have 420 pupils.

Kāshīpur Tahsīl.—South-western *tahsīl* and subdivision of Nainī Tāl District, United Provinces, conterminous with the *pargana* of the same name, lying between 29° 7′ and 29° 22′ N. and 78° 43′ and 79° 4′ E., with an area of 189 square miles. Population fell from 73,168 in 1891 to 55,632 in 1901, the rate of decrease being the highest in the District. There are 147 villages and two towns: KĀSHĪPUR (population, 12,023), the *tahsīl* head-quarters, and JASPUR (6,480). The demand for land revenue in 1903–4 was Rs. 90,000, and for cesses Rs. 11,000. The density of population, 294 persons per square mile, is also the highest in the District. The *tahsīl* resembles the adjoining parts of Rohilkhand. It lies entirely in the plains, and is not so damp as the Tarai. In 1903–4 the area under cultivation was 69 square miles, of which 10 were irrigated, almost entirely from canals.

Kāshīpur Town.—Head-quarters of the Kāshīpur *tahsīl* of Nainī Tāl District, United Provinces, situated in 29° 13′ N. and 78° 58′ E., on a road from Morādābād: a railway from the same place has been projected. Population (1901), 12,023. Near the town are extensive ruins of forts and temples, which were identified by General Cunningham with the capital of the kingdom of Govisāna, visited by the Chinese pilgrim in the seventh century. There are several tanks in the neighbourhood, one of which is called after Drona, the tutor of the Pāndava brothers. A brick inscribed in characters of the third or fourth century A.D. was recently found here. The modern town is named after its founder, Kāshi Nāth, the governor of the *pargana* in the sixteenth or seventeenth century. In the latter half of the eighteenth century Nand Rām, the governor, became practically independent of the Chand Rājā of Almorā; and his nephew, Shib Lāl, was in possession at the date of the cession to the British in 1801. Kāshīpur contains a fair-sized bazar with brick-built houses; but outside of this the houses are chiefly of mud. The largest building is the residence of the Rājā, who is descended from an illegitimate branch of the Chand Rājās of Almorā. Besides the usual courts there is a dispensary. Kāshīpur has been a municipality since 1872. During the ten years ending 1901 the income and expenditure averaged Rs. 11,000. In 1903–4 the income was Rs. 14,000, chiefly from tolls (Rs. 5,000) and a tax on circumstances and property (Rs. 3,000); and the expenditure was Rs. 12,000. There is a flourishing trade in cloth, metal vessels, and hill produce. The municipality supports a school with 75 pupils.

Kashkār.—Capital of Chitrāl State, North-West Frontier Province. See CHITRĀL.

Kashmīr and Jammu.—The territories of the Mahārājā of Kashmīr and Jammu may be roughly described in the words of the

treaty of March 16, 1846, as 'situated to the eastward of the river Indus and westward of the river Rāvi.' This country, known to the English as Kashmīr and to the Indians as Jammu, covers an area of 80,900 square miles, extending from 32° 17′ to 36° 58′ N. and from 73° 26′ to 80° 30′ E. It may be likened to a house with many storeys.

Physical aspects.

The door is at Jammu, and the house faces south, looking out on the Punjab Districts of Jhelum, Gujrāt, Siālkot, and Gurdāspur. There is just a fringe of level land along the Punjab frontier, bordered by a plinth of low hilly country sparsely wooded, broken, and irregular. This is known as the *Kandi*, the home of the Chibs and the Dogrās. Then comes the first storey, to reach which a range of mountains, 8,000 feet high, must be climbed. This is a temperate country with forests of oak, rhododendron, and chestnut, and higher up of *deodār* and pine, a country of beautiful uplands, such as Bhadarwāh and Kishtwār, drained by the deep gorge of the Chenāb river. The steps of the Himālayan range known as the Pīr Panjāl lead to the second storey, on which rests the exquisite valley of Kashmīr, drained by the Jhelum river. Up steeper flights of the Himālayas we pass to Astor and Baltistān on the north and to Ladākh on the east, a tract drained by the river Indus. In the back premises, far away to the north-west, lies Gilgit, west and north of the Indus, the whole area shadowed by a wall of giant mountains which run east from the Kilik or Mintaka passes of the Hindu Kush, leading to the Pāmirs and the Chinese dominions past Rakaposhi (25,561 feet), along the Muztāgh range past K 2 (Godwin Austen, 28,265 feet), Gasherbrum and Masherbrum (28,100 and 25,660 feet respectively) to the Karakoram range which merges in the Kuenlun mountains. Westward of the northern angle above Hunza-Nagar the mighty maze of mountains and glaciers trends a little south of east along the Hindu Kush range bordering Chitrāl, and so on into the limits of Kāfiristān and Afghān territory.

At the Karakoram pass (18,317 feet) the wall zigzags, and to the north-east of the State is a high corner bastion of mountain plains at an elevation of over 17,000 feet, with salt lakes dotted about. Little is known of that bastion; and the administration of Jammu and Kashmīr has but scanty information about the eastern wall of the property, which is formed of mountains of an elevation of about 20,000 feet, and crosses lakes, like Pangkong, lying at a height of nearly 14,000 feet. The southern boundary repeats the same features—grand mountains running to peaks of over 20,000 feet; but farther west, where the wall dips down more rapidly to the south, the elevation is easier, and we come to Bhadarwāh (5,427 feet) and to the still easier heights of Basoli (2,170 feet) on the Rāvi river. From Mādhopur, the head-works of the Bāri Doāb Canal, the Rāvi river

ceases to be the boundary, and a line crossing the Ujh river and the watershed of the low Dogrā hills runs fairly straight to Jammu. A similar line, marked by a double row of trees, runs west from Jammu to the Jhelum river. From the south-west corner of the territories the Jhelum river forms an almost straight boundary on the west as far as its junction with the Kunhār river, 14 miles north of Kohāla. At that point the western boundary leaves the river and clings to the mountains, running in a fairly regular line to the grand snow scarp of Nanga Parbat (26,182 feet). Thence it runs almost due north to the crossing of the Indus at Rāmghāt under the Hattu Pīr, then north-west, sweeping in Puniāl, Yāsīn, Ghizar, and Koh, the Mehtarjaos or chiefs of which claim the Tangir and Darel country, and linking on to the Hindu Kush and Muztāgh ranges which look north to Chinese territory and south to Hunza-Nagar and Gilgit.

It is said of the first Mahārājā Gulāb Singh, the builder of the edifice just described, that when he surveyed his new purchase, the valley of Kashmīr, he grumbled and remarked that one-third of the country was mountains, one-third water, and the remainder alienated to privileged persons. Speaking of the whole of his dominions, he might without exaggeration have described them as nothing but mountains. There are valleys, and occasional oases in the deep cañons of the mighty rivers; but mountain is the predominating feature and has strongly affected the history, habits, and agriculture of the people. Journeying along the haphazard paths which skirt the river banks, till the sheer cliff bars the way and the track is forced thousands of feet over the mountain top, one feels like a child wandering in the narrow and tortuous alleys which surround some old cathedral in England.

It is impossible within the limit of this article to deal in detail with the nooks and corners where men live their hard lives and raise their poor crops in the face of extraordinary difficulties. There are interesting tracts like Padar on the southern border, surrounded by perpetual snow, where the edible pine and the *deodār* flourish, and where the sunshine is scanty and the snow lies long. It was in Padar that were found the valuable sapphires, pronounced by experts the finest in the world. Farther east across the glaciers lies the inaccessible country of Zāskār, said to be rich in copper, where the people and cattle live indoors for six months out of the year, where trees are scarce and food is scarcer. Zāskār has a fine breed of ponies. Farther east is the lofty Rupshu, the lowest point of which is 13,500 feet; and even at this great height barley ripens, though it often fails in the higher places owing to early snowfall. In Rupshu live the nomad Champas, who are able to work in an air of extraordinary rarity, and complain bitterly of the heat of Leh (11,500 feet).

Everywhere on the mass of mountains are places worthy of mention.

but the reader will gain a better idea of the country if he follows one or more of the better-known routes. A typical route will be that along which the troops sometimes march from JAMMU, the winter capital, past the Summer Palace at Srīnagar in Kashmīr to the distant outpost at Gilgit. The traveller will leave the railway terminus on the south bank of the Tāwi, the picturesque river on which Jammu is built. From Jammu (1,200 feet) the road rises gently to Dansāl (1,840 feet), passing through a stony country of low hills covered with acacias, then over steeper hills of grey sandstone where vegetation is very scarce, over the Laru Lari pass (8,200 feet), dropping down again to 5,150 feet and lower still to Rāmban (2,535 feet), where the Chenāb river is crossed, then steadily up till the Banihāl pass (9,230 feet) is gained and the valley of Kashmīr lies below.

So far the country has been broken, and the track devious, with interminable ridges, and for the most part, if we except the vale of the Bichlari, the pine woods of Chineni, and the slopes between Rāmban and Deogol (Banihāl), a mere series of flat uninteresting valleys, unrelieved by forests. It is a pleasure to pass from the scenery of the outer hills into the green fertile valley of Kashmīr—the emerald set in pearls. The valley is surrounded by mountain ranges which rise to a height of 18,000 feet on the north-east, and until the end of May and sometimes by the beginning of October there is a continuous ring of snow around the oval plain. Leaving the Banihāl pass—and no experienced traveller cares to linger on that uncertain home of the winds—the track rapidly descends to Vernāg (6,000 feet), where a noble spring of deep-blue water issues from the base of a high scarp. This spring may be regarded as the source of Kashmīr's great river and waterway, commonly known as the JHELUM, the Hydaspes of the ancients, the Vitastā in Sanskrit, and spoken of by the Kashmīris as the Veth. Fifteen miles north the river becomes navigable; and the traveller, after a march of 110 miles, embarks at Khānabal in a flat-bottomed boat and drops gently down to Srīnagar, the capital of Kashmīr.

Looking at a map of Kashmīr, one sees a white footprint set in a mass of black mountains. This is the celebrated valley, perched securely among the Himālayas at an average height of 6,000 feet above the sea. It is approximately 84 miles in length and 20 to 25 miles in breadth. North, east, and west, range after range of mountains guard the valley from the outer world, while in the south it is cut off from the Punjab by rocky barriers, 50 to 75 miles in width. The mountain snows feed the river and the streams, and it is calculated that the Jhelum in its course through the valley has a catchment area of nearly 4,000 square miles. The mountains which surround Kashmīr are infinitely varied in form and colour. To the north lies a veritable sea of mountains broken into white-crested waves, hastening away in

wild confusion to the great promontory of Nanga Parbat (26,182 feet). To the east stands Harāmukh (16,903 feet), the grim mountain which guards the valley of the Sind. Farther south is Mahādeo, very sacred to the Hindus, which seems almost to look down upon Srīnagar; and south again are the lofty range of Gwāsh Brāri (17,800 feet), and the peak of Amarnāth (17,321 feet), the mountain of the pilgrims and very beautiful in the evening sun. On the south-west is the Panjāl range with peaks of 15,000 feet, over which the old imperial road of the Mughals passes; farther north the great rolling downs of the Tosh Maidān (14,000 feet), over which men travel to the Pūnch country; and in the north-west corner rises the Kājināg (12,125 feet), the home of the *mārkhor*.

On the west, and wherever the mountain-sides are sheltered from the hot breezes of the Punjab plains, which blow across the intervening mountains, there are grand forests of pines and firs. Down the tree-clad slopes dash mountain streams white with foam, passing in their course through pools of the purest cobalt. When the great dark forests cease and the brighter woodland begins, the banks of the streams are ablaze with clematis, honeysuckle, jasmine, and wild roses which remind one of azaleas. The green smooth turf of the woodland glades is like a well-kept lawn, dotted with clumps of hawthorn and other beautiful trees and bushes. It would be difficult to describe the colours that are seen on the Kashmīr mountains. In early morning they are often a delicate semi-transparent violet relieved against a saffron sky, and with light vapours clinging round their crests. The rising sun deepens the shadows, and produces sharp outlines and strong passages of purple and indigo in the deep ravines. Later on it is nearly all blue and lavender, with white snow peaks and ridges under a vertical sun; and as the afternoon wears on these become richer violet and pale bronze, gradually changing to rose and pink with yellow or orange snow, till the last rays of the sun have gone, leaving the mountains dyed a ruddy crimson, with the snows showing a pale creamy green by contrast. Looking downward from the mountains the valley in the sunshine has the hues of the opal; the pale reds of the *karewas*, the vivid light greens of the young rice, and the darker shades of the groves of trees relieved by sunlight sheets, gleams of water, and soft blue haze give a combination of tints reminding one irresistibly of the changing hues of that gem. It is impossible in the scope of this article to do justice to the beauty and grandeur of the mountains of Kashmīr, or to enumerate the lovely glades and forests, visited by so few. Much has been written of the magnificent scenery of the Sind and Liddar valleys, and of the gentler charms of the Lolāb, but the equal beauties of the western side of Kashmīr have hardly been described. Few countries can offer anything grander than the deep-green

mountain tarn, Konsanāg, in the Panjāl range, the waters of which make a wild entrance into the valley over the splendid cataract of Arabal, while the rolling grass mountain called Tosh Maidān, the springy downs of Raiyār looking over the Suknāg river as it twines, foaming down from the mountains, the long winding park known as Yusumarg, and lower down still the little hills which remind one of Surrey, and Nilnāg with its pretty lake screened by the dense forests, are worthy to be seen.

As one descends the mountains and leaves the woodland glades, cultivation commences immediately, and right up to the fringe of the forests maize is grown and walnut-trees abound. A little lower down, at an elevation of about 7,000 feet, rice of a hardy and stunted growth is found, and the shady plane-tree appears. Lower still superior rices are grown, and the watercourses are edged with willows. The side valleys which lead off from the vale of Kashmīr, though possessing distinctive charms of their own, have certain features in common. At the mouth of the valley lies the wide delta of fertile soil on which the rice with its varying colours, the plane-trees, mulberries, and willows grow luxuriantly; a little higher up the land is terraced and rice still grows, and the slopes are ablaze with the wild indigo, till at about 6,000 feet the plane-tree gives place to the walnut, and rice to millets. On the left bank of the mountain river endless forests stretch from the bottom of the valley to the peaks; and on the right bank, wherever a nook or corner is sheltered from the sun and the hot breezes of India, the pines and firs establish themselves. Farther up the valley, the river, already a roaring torrent, becomes a veritable waterfall dashing down between lofty cliffs, whose bases are fringed with maples and horse-chestnuts, white and pink, and millets are replaced by buckwheat and Tibetan barley. Soon after this the useful birch-tree appears, and then come grass and glaciers, the country of the shepherds.

Where the mountains cease to be steep, fan-like projections with flat arid tops and bare of trees run out towards the valley. These are known as *karewas*. Sometimes they stand up isolated in the middle of the valley, but, whether isolated or attached to the mountains, the *karewas* present the same sterile appearance and offer the same abrupt walls to the valley. The *karewas* are pierced by mountain torrents and seamed with ravines. Bearing in mind that Kashmīr was once a lake, which dried up when nature afforded an outlet at Bāramūla, it is easy to recognize in the *karewas* the shelving shores of a great inland sea, and to realize that the inhabitants of the old cities, the traces of which can be seen on high bluffs and on the slope of the mountains, had no other choice of sites, since in those days the present fertile valley was buried beneath a waste of water.

Kashmīr abounds in mountain tarns, lovely lakes, and swampy lagoons. Of the lakes the Wular, the Dal, and the Manasbal are the

most beautiful. It is also rich in springs, many of which are thermal. They are useful auxiliaries to the mountain streams in irrigation, and are sometimes the sole sources of water, as in the case of Achabal, Vernāg, and Kokārnāg on the south, and Arpal on the east. Islāmābād or Anantnāg, 'the place of the countless springs,' sends out numerous streams. One of these springs, the Maliknāg, is sulphurous, and its water is highly prized for garden cultivation. The Kashmīris are good judges of water. They regard Kokarnāg as the best source of drinking-water, while Chashma Shāhi above the Dal Lake stands high in order of merit.

It is time now for the traveller who has been resting in Srīnagar to set out on the great northern road which leads to Gilgit. He will have admired the quaint, insanitary city lying along the banks of the Jhelum, with a length of 3 miles and an average breadth of $1\frac{1}{4}$ miles on either side of the river. The houses vary in size from the large and spacious brick palaces of the Pandit aristocrat and his 500 retainers, warmed in the winter by *hammāms*, to the doll house of three storeys, where the poor shawl-weaver lives his cramped life, and shivers in the frosty weather behind lattice windows covered with paper. In the spring and summer the earthen roofs of the houses, resting on layers of birch-bark, are bright with green herbage and flowers. The canals with their curious stone bridges and shady waterway, and the great river with an average width of eighty yards, spanned by wooden bridges, crowded with boats of every description, and lined by bathing boxes, are well worth studying. The wooden bridges are cheap, effective, and picturesque, and their construction is ingenious, for in design they appear to have anticipated the modern cantilever principle. Old boats filled with stones were sunk at the sites chosen for pier foundations. Piles were then driven and more boats were sunk. When a height above the low-water level was reached, wooden trestles of *deodār* were constructed by placing rough-hewn logs at right angles. As the structure approached the requisite elevation to admit of *chakwāris* (house boats) passing beneath, *deodār* logs were cantilevered. This reduced the span, and huge trees were made to serve as girders to support the roadway. The foundations of loose stones and piles have been protected on the upstream side by planking, and a rough but effective cut-water made. The secret of the stability of these old bridges may, perhaps, be attributed to the skeleton piers offering little or no resistance to the large volume of water brought down at flood-time. It is true that the heavy floods of 1893 swept away six out of the seven city bridges, and that the cumbrous piers tend to narrow the waterway, but it should be remembered that the old bridges had weathered many a serious flood. Not long ago two of the bridges, the Habba Kadal and the Zaina Kadal, had rows of shops on them reminding one of Old London Bridge; but these have now been cleared away.

The distance by road from Srīnagar to Gilgit is 228 miles, and the traveller can reach Bandipura at the head of the Wular Lake by boat or by land. The Gilgit road, which cost the Kashmīr State, in the first instance, 15 lakhs, is a remarkable achievement, and was one of the greatest boons ever conferred on the Kashmīrí subjects of the Mahārājā. Previous to its construction supplies for the Gilgit garrison were carried by impressed labourers, many of whom perished on the passes, or returned crippled and maimed by frost-bite on the snow or accident on the goat paths that did duty for roads. The journey to Gilgit before 1890 has been aptly compared with the journey to Siberia. Now, supplies are carried on ponies and the name Gilgit is no longer a terror to the people of Kashmīr.

From Bandipura a steep ascent leads to the Raj Diāngan pass (11,800 feet), a most dreaded place in the winter months, when the cold winds mean death to man and beast. Thence through a beautifully wooded and watered country, past the lovely valley of Gurais, down which the Kishangangā flows, the traveller has no difficulties till he reaches the Burzil pass (13,500 feet), below which the summer road to Skārdu across the dreary wastes of the Deosai plains branches off to the north-east. This is a very easy pass in summer, but is very dangerous in a snowstorm or high wind.

Descending from the Burzil the whole scene changes. The forests and vegetation of Kashmīr are left behind, the trees are few and of a strange appearance, and the very flowers look foreign. It is a bleak and rugged country, and when Astor (7,853 feet) is left the sense of desolation increases. Nothing can be more dreary than the steep descent from Doian down the side of the arid Hattu Pīr into the sterile waste of the Indus valley. It is cool at Doian (8,720 feet); it is stifling at Rāmghāt (3,800 feet), where one passes over the Astor river by a suspension bridge. The old construction was a veritable bridge of sighs to the Kashmīr convicts who were forced across the river and left to their fate —starvation or capture by the slave-hunters from Chilās. A little cultivation at Bunji relieves the eye; but there is nothing to cheer the traveller until the Indus has been crossed by a fine bridge, and 30 miles farther the pleasant oasis of Gilgit is reached.

The Indus valley is a barren dewless country. The very river with its black water looks hot, and the great mountains are destitute of vegetation. The only thing of beauty is the view of the snowy ranges, and Nanga Parbat in the rising sun seen from the crossing of the Indus river to Gilgit sweeps into oblivion the dreadful desert of sands and rock. Gilgit (4,890 feet) itself is fertile and well watered. The mountains fall back from the river, and leave room for cultivation on the alluvial land bordering the right bank of the Gilgit river, a rare feature in the northern parts of the Mahārājā's dominion.

Another route giving a general idea of the country runs from west to east, from Kohāla on the Jhelum to Leh, about 5 miles beyond the Indus. A good road from Rāwalpindi brings the traveller to Kohāla, where he crosses the Jhelum by a bridge, and enters the territories of Jammu and Kashmīr. The cart-road passes from Kohāla to Srīnagar, a distance of 132 miles, by easy gradients. As far as Bāramūla the road is close to the river, but for the most part at a great height above it, and the scenery is beautiful. At Muzaffarābād the Kishangangā river joins the Jhelum, and here the road from Abbottābād and Garhi Habīb-ullah connects with the Kashmīr route. The road runs along the left bank of the Jhelum, through careful terraced cultivation, above which are pine forests and pastures. It carries a very heavy traffic, but owing to the formation of the country it is liable to constant breaches, and is expensive to keep in repair.

From Uri a road runs south to the country of the Rājā of Pūnch, the chief feudatory of the Mahārājā, crossing the Hāji pass (8,500 feet). At Bāramūla the road enters the valley of Kashmīr, and runs through a continuous avenue of poplars to Srīnagar. In bygone days this route, known as the Jhelum valley road—now the chief means of communication with India—was little used. The Bambās and Khakhās, who still hold the country, were a restless and warlike people; and the numerous forts that command the narrow valley suggest that the neighbourhood was unsafe for the ordinary traveller. The construction of the road from Kohāla to Bāramūla cost the State nearly 22 lakhs.

From Srīnagar to Leh is 243 miles. The first part of the journey runs up the Sind valley, perhaps the most exquisite scenery in Kashmīr. Fitful efforts are made from time to time to improve this important route, but it still remains a mere fair-weather track. The Sind river thunders down the valley, and the steep mountains rise on either side, the northern slopes covered with pine forest, the southern bare and treeless. At Gagangir the track climbs along the river torrent to Sonāmarg (8,650 feet), the last and highest village in the Sind valley, if we except the small hamlet of Nilagrar some 2 miles higher up. Sonāmarg is a beautiful mountain meadow surrounded by glaciers and forests. It is a miserable place in the winter time, but it is of great importance to encourage a resident population. The chief staples of cultivation are *grim*, or Tibetan barley, and buckwheat. It is good to turn loose the baggage ponies to graze on the meadow grasses; for in a few more marches one passes into a region like the country beyond the Burzil on the road to Gilgit, a land devoid of forests and pastures, 'a desert of bare crags and granite dust, a cloudless region always burning or freezing under the clear blue sky.' The Zoji La (11,300 feet) is the lowest depression in the great Western Himālayas which run from the Indus valley on the Chilās frontier. Over this high range the rains

from the south hardly penetrate, and the cultivation, scanty and difficult, depends entirely on artificial canals. The ascent to the Zoji La from Kashmīr is very steep, the descent to the elevated table-land of Tibet almost imperceptible. For five marches the route follows the course of the Drās river, through a desolate country of piled up rocks and loose gravel. At Chanagund the road to Skārdu crosses the Drās river by a cantilever bridge, 4 miles above the junction of the Drās and Suru rivers, and about 8 miles farther on the Indus receives their waters. But the steep cliffs of the Indus offer no path to the traveller, and the track leaves the Drās river, and turns in a southerly direction to Kargil, a delightful oasis. Then the road abandons the valleys and ascends the bare mountains. The dreary scenery is compensated by the cloudless pale blue sky and the dry bracing air so characteristic of Ladākh. Through gorges and defiles the valley of Shergol is reached, the first Buddhist village on the road. Thenceforward the country is Buddhist, and the road runs up and down over the Namika La (13,000 feet) and over the Fotu La (13,400 feet), the highest point on the Leh road. Along the road near the villages are Buddhist monasteries, *manis* (walls of praying stones) and *chortens*, where the ashes of the dead mixed with clay and moulded into a little idol are placed, and at Lamayaru there is a wilderness of monuments. Later, the Indus is crossed by a long cantilever bridge; and the road runs along the right bank through the fertile oasis of Khalsi, then through the usual desert with an occasional patch of vegetation to Leh (11,500 feet), the capital of Western Tibet and of Western Buddhism, and the trade terminus for caravans from India and from Central Asia. It is a long and difficult road from Leh to Yārkand, 482 miles, over the Khardung La, the Sasser La, and the Karakoram pass of between 17,000 and 19,000 feet altitude, where the useful yāk (*Bos grunniens*) relieves the ponies of their loads when fresh snow has fallen, or serves unladen to consolidate a path for the ponies.

A brief description may be given of one more of the many routes that follow the rivers and climb the mountains—the route from Leh through Baltistān to Astor on the Gilgit road. At Khalsi, where the Srīnagar-Leh road crosses the Indus, the track keeps to the right bank of the Indus, and passing down the deep gorge of the river comes to a point where the stupendous cliffs and the roaring torrent prevent farther progress. There the traveller strikes away from the Indus and ascends the mountains to the Chorbat pass (16,700 feet), covered with snow even in July. From the pass, across the valley of the Shyok river, the great Karakoram range, some 50 miles away, comes into view. An abrupt descent carries the traveller from winter into hot summer; and by a difficult track which in places is carried along the face of the cliff by frail scaffolding (*pari*), following the course of the Shyok river, smoothly flowing between white sands of granite, and passing many

pleasant oases, one comes to the grateful garden of Khapallu, a paradise to the simple Baltis. Crossing the united waters of the Shyok and the Indus on a small skin raft, the traveller arrives at Skārdu (7,250 feet), the old capital of Baltistān. Here the mountains on either side of the Indus recede, and the sandy basin, about 5 miles in breadth, is partially irrigated by water from the pretty mountain lake of Satpura and carefully cultivated. Looking across the Indus to the north, the Shigar valley, the garden of Baltistān, with its wealth of fruit trees is seen. There the cultivator adds to his resources by washing gold from the sands of the river. From Skārdu the direct route to Gilgit follows the Indus, which is crossed at Rondu by a rope bridge so long as to be most trying to the nerves, but a fair-weather track over the Banak pass lands the traveller on the Gilgit road at Astor.

It is difficult to give a general idea of a country so diversified as Kashmīr and Jammu. As will be seen in the section on History, a strange destiny has brought people of distinct races, languages, and religions, and countries of widely different physical characteristics, under the rule of the Mahārājā.

The Kashmīr territory may be divided physically into two areas: the north-eastern, comprising the area drained by the Indus with its tributaries; and the south-western, including the country drained by the Jhelum with its tributary the Kishangangā, and by the Chenāb. The dividing line or watershed is formed by the great central mountain range which runs from Nanga Parbat, overhanging the Indus on the north-west, in a south-easterly direction for about 240 miles till it enters British territory in Lāhul.

The south-western area may, following the nomenclature of Mr. Drew, in its turn be geographically divided into three sections: the region of the outer hills, the middle mountains, and the Kashmīr Valley.

Approaching Kashmīr from the plains of the Punjab, the boundary is not at the foot of the hills, but embraces a strip of the great plains from 5 to 15 miles wide, reaching from the Rāvi to the Jhelum. As is generally the case along the foot of the Western Himālayas, this tract of flat country is somewhat arid and considerably cut up by ravines which carry off the flood-water of the monsoon. A fair amount of cultivation is found on the plateaux between these ravines, though, being entirely dependent on the rainfall, the yield is somewhat precarious. The height of this tract may be taken at from 1,100 to 1,200 feet above sea-level.

Passing over the plain a region of broken ground and low hills is reached, running mainly in ridges parallel to the general line of the Himālayan chain. These vary in height from 2,000 to 4,000 feet, and are largely composed of sandstone, being in fact a continuation of the Siwālik geological formation. Lying between these parallel ridges are

a series of valleys or *dūns*, fairly well populated, in the east by Dogrās and in the west by Chibs. These hills are sparsely covered with low scrub bushes, the *chīr* (*Pinus longifolia*) gradually predominating as the inner hills are reached. Beyond these lower hills rise the spurs of a more mountainous district.

The scope of this region, as defined by Mr. Drew, has been somewhat extended, and includes the range which forms the southern boundary of the Kashmīr Valley, known as the Panjāl range, and its continuation eastwards beyond the Chenāb. This tract is about 180 miles long and varies in width from 25 to 35 miles. The portion lying between the Jhelum and Chenāb is formed by the mass of mountainous spurs running down from the high Panjāl range which forms its northern limit. The Panjāl itself, extending from Muzaffarābād on the Jhelum to near Kishtwār on the Chenāb, is a massive mountain range, the highest central portion to which the name is truly applied having a length of 80 miles, with peaks rising to 14,000 and 15,000 feet. From the southern side a series of spurs branch out, which break up the ground into an intricate mountain mass cut into by ravines or divided by narrow valleys.

The elevation of these middle mountains is sufficient to give a thoroughly temperate character to the vegetation. Forests of Himālayan oak, pine, spruce, silver fir, and *deodār* occupy a great part of the mountain slopes; the rest, the more sunny parts, where forest trees do not flourish, is, except where rocks jut out, well covered with herbage, with plants and flowers that resemble those of Central or Southern Europe. East of the Chenāb river rises a somewhat similar mass of hills, forming the district of Bhadarwāh, with peaks varying from 9,000 to 14,000 feet in height. These culminate in the high range which forms the Chamba and Rāvi watershed in Chamba territory.

The third section of the south-western area bears a unique character in the Himālayas, consisting of an open valley of considerable extent completely surrounded by mountains. The boundaries are formed on the north-east by the great central range which separates the Jhelum and Indus drainage, and on the south by the Panjāl range already described. The eastern boundary is formed by a high spur of the main range, which branching off at about 75° 30′ E. runs nearly due south, its peaks maintaining an elevation of from 12,000 to 14,000 feet. This minor range forms the watershed between the Jhelum and Chenāb, separating the Kashmīr from the Wardwān valley. It eventually joins and blends with the Panjāl range about 16 miles west of Kishtwār. On the north and west, the bounding ranges of the valley are more difficult to describe. A few miles west of the spot from which the eastern boundary spur branches near the Zoji La, another minor range is given off. This runs nearly due west for about

100 miles at an elevation of from 12,000 to 13,000 feet, with a width of from 15 to 20 miles. It forms the watershed between the Jhelum on the south and its important tributary the Kishangangā on the north. After reaching 74° 15′ E. the ridge gradually curves round to the south, until it reaches the Jhelum abreast of the western end of the Panjāl range. The valley thus enclosed has a length, measured from ridge to ridge, of about 115 miles with a width varying from 45 to 70 miles, and is drained throughout by the Jhelum with its various tributaries. The flat portion is much restricted, owing to the spurs given off by the great central range, which run down into the plain, forming the well-known Sind and Liddar valleys. On the southern side the spurs from the Panjāl range project 10 to 16 miles into the plain.

The north-eastern section is comprised between the great central chain on the south and the Karakoram range and its continuation on the north. It is drained by the Indus and its great tributaries, the Shyok, the Zāskār, the Suru, and the Gilgit rivers. The chief characteristic of this region, more especially of the eastern portion, is the great altitude of the valleys and plains. The junction of the Gilgit and Indus rivers is 4,300 feet above sea-level. Proceeding upstream, 80 miles farther east at the confluence of the Shyok and Indus, the level of the latter is 7,700 feet; opposite Leh, 130 miles farther up the river, its height is 10,600 feet, while near the Kashmir-Tibet boundary in the Kokzhung district the river runs at the great height of 13,800 feet above sea-level.

Between the various streams which drain the country rise ranges of mountains, those in the central portions attaining an elevation of 16,000 to 20,000 feet, while the mighty flanking masses of the Karakoram culminate in the great peak Godwin Austen (28,265 feet). The difference of the level in the valleys between the eastern and western tracts has its natural effect on the scenery. In the east, as in the Rupshu district of Ladākh, the lowest ground is 13,500 feet above the sea, while the mountains run very evenly to a height of 20,000 or 21,000 feet. The result is a series of long open valleys, bounded by comparatively low hills having very little of the characteristics of what is generally termed a mountainous country. To the west as the valleys deepen, while the bordering mountains keep at much the same elevation, the character of the country changes, and assumes the more familiar Himālayan character of massive ridges and spurs falling steeply into the deep valleys between.

The central chain commences in the west at the great mountain mass rising directly above the Indus, of which the culminating peak is Nanga Parbat. From this point it runs in a south-easterly direction, forming the watershed between the Indus and the Kishangangā. It quickly falls to an altitude of 14,000 to 15,000 feet, at which it con-

tinues for 50 or 60 miles. It is crossed by several passes, the best known of which are the Burzil on the road from Kashmīr to Gilgit, and the Zoji La of 11,300 feet, over which runs the road from Srīnagar to Drās and Leh. From the Zoji La the mountains rapidly rise in elevation, the peaks attaining an altitude of 18,000 to 20,000 feet, culminating in the Nun Kun peaks which rise to a height of over 23,000 feet. Owing to their altitude these mountains are under perpetual snow, and glaciers form in every valley. The range keeps this character throughout Kashmīr territory for a distance of 150 miles to the Bārā Lācha (pass), where it passes into Spiti.

The Karakoram range is of a far more complicated character. Broadly speaking, it is a continuation of the Hindu Kush, and forms the watershed between the Central Asian drainage and the streams flowing into the Indian Ocean. From its main ridge lofty spurs extend into Kashmīr, separating the various tributaries of the Indus, the result being a stupendous mountain mass 220 miles long, with a width on the south side of the watershed of 30 to 60 miles, with peaks averaging from 21,000 to 23,000 feet, culminating on the west in the well known Rakaposhi mountain, north of Gilgit, over 25,500 feet high, and in the mighty group of peaks round the head of the Baltoro glacier dominated by the second highest mountain in the world, Godwin Austen, whose summit is 28,265 feet above the sea. The head of every valley is the birthplace of a glacier. Many of these are of immense size, such as the Baltoro, the Biafo, and Hispar glaciers, the two latter forming an unbroken stretch of ice over 50 miles long. This great mountain barrier is broken through at one point by the Hunza stream, a tributary of the Gilgit river, the watershed at the head of which has the comparatively low elevation of about 15,500 feet. The next well-known pass lies 150 miles to the east, where the road from Leh to Yārkand leads over the Karakoram pass at an altitude of about 18,300 feet.

A description of this mountainous region would be incomplete without a reference to the vast elevated plains of Lingzhithang, which lie at the extreme north-eastern limit of Kashmīr territory. These plains are geographically allied to the great Tibetan plateau. The ground-level is from 16,000 to 17,000 feet above the sea, and such rain as falls drains into a series of salt lakes. Of vegetation there is little or none, the country being a desolate expanse of earth and rock. The northern border of this plateau is formed by the Kuenlun mountains, the northern face of which slopes down into the plains of Khotan.

An account of the geology will be found in the memoir by Mr. R. Lydekker, *The Geology of the Kashmīr and Chamba Territories and the British District of Khagan.* Mr. Lydekker differs from Mr. Drew, also an expert in geology, who held that some of the gravels at Bāramūla were of glacial origin, indicating the existence of glaciers in

the valley at a level of 5,000 feet; but he has no doubts as to their existence on the Pīr Panjāl range and in the neighbourhood of the various *margs* or mountain meadows which surround the valley. The question of the glaciation and the evidences of relative changes of level within a geologically recent period is fully discussed for the Sind valley by Mr. R. D. Oldham in *Records, Geological Survey of India*, vol. xxxii, part ii.

There is abundant evidence that igneous or volcanic agencies were actively at work, as is proved by the outpouring of vast quantities of volcanic rocks; but these are not known to have been erupted since the eocene period. Subterraneous thermal action is, however, indicated by the prevalence of numerous hot springs. The burning fields at Soiyam, of which an account is given by Sir W. Lawrence, *Valley of Kashmīr*, pp. 42–3, point to the same conclusion, and the frequency of earthquakes suggests subterranean instability in this area.

The following table of geological systems in descending order is given by Mr. Lydekker for the whole State:—

	European equivalents.
Alluvial system:	
Low-level alluvia, &c.	Prehistoric.
High-level alluvia, glacial, lacustrine, and *karewa* series	Pleistocene.
Tertiary system:	
Siwālik series { Outer . . . / Inner . . .	Pliocene.
Sirmūr series { Murree group	Miocene.
Sabāthu group / Indus Tertiaries	Eocene.
Zāskār system:	
Chikkim series	Cretaceous.
Supra-Kuling series	Jura and Trias.
Kuling series	Carboniferous.
Panjāl system:	
Not generally subdivided	Silurian. Cambrian.
Metamorphic system:	
Metamorphosed Panjāls, &c. / Central gneiss	Palaeozoic and Archaean.

Under the first of these systems, Mr. Lydekker has discussed the interesting question, whether Kashmīr was once covered by a great lake. In this discussion the *karewas* already described play an important part, and the only explanation of the upper *karewas* is that Kashmīr was formerly occupied by a vast lake of which the existing lakes are remnants. Mr. Drew estimated that at one period this lake

must have reached a level of nearly 2,000 feet above the present height of the valley, but this estimate is considered far too high by Mr. Lydekker. No very satisfactory conclusions can be drawn at present as to the barrier which dammed the old lake, or as to the relative period of its existence.

A full account of the flora of Kashmīr is given by Lawrence, *Valley of Kashmīr*, chap. iv. The valley has an enormous variety of plants, and the Kashmīri finds a use for most of them. Among condiments the most important is the *zīra siyāh* (*Carum sp.*), or carraway. Under drugs, *Cannabis sativa*, the hemp plant, and *Artemisia* or *tetwan* may be mentioned. Asafoetida is found in the Astor *tahsīl*. Numerous plants yield dyes and tans, of which *Datisca cannabina*, *Rubia cordifolia*, and *Geranium nepalense* are the most familiar. Kashmīr is rich in fibres, and the people make great use of them. The two best are the *Abutilon Avicennae* and the *Cannabis sativa*. *Burza* (*Betula utilis*), the paper birch, is a most important tree to the natives. The bark is employed for various purposes, such as roofs of houses, writing paper, and packing paper. Many of the ancient manuscripts are written on birch bark. The Kashmīri neglects nothing which can be eaten as fodder. The willow, the Indian chestnut, the cotoneaster, the hawthorn, and the poplar are always lopped to provide fodder for cattle and sheep in the winter.

Excellent grasses abound, and the swamps yield most nutritious reeds and other plants. There is an abundance of food-plants, too numerous to be enumerated here. *Euryale ferox*, *Nymphaea stellata*, *N. alba*, *Nelumbium speciosum*, the exquisite pink water-lily, *Acorus Calamus*, and *Typha sp.*, the reed mace, all contribute to the Kashmīri's sustenance. Wild fruits are in profusion, and many fungi are eaten by the people. The mushroom is common, and the *morel* (*Morchella sp.*) abounds in the mountains and forms an important export to India. There are plants that are useful for hair-washes, and the herbs with medicinal properties are almost innumerable. *Macrotomia Benthami* is one of these peculiarly esteemed by the Kashmīris as a remedy for heart-affections. Among the scents may be noted *Gogal dhup* (*Jurinea macrocephala*), which is largely exported to India, where it is used by Hindus. The most important of the aromatic plants is the *Saussurea Lappa*. This grows at high elevations from 8,000 to 9,000 feet. The root has a scent like orris with a blend of violet. It is largely exported to China, where it is used as incense in the joss houses. It has many valuable properties, and is a source of considerable revenue to the State. There is a great variety of trees, but the oak, the holly, and the Himālayan rhododendron are unknown. Among the long list of trees may be noticed the *deodār*, the blue pine, the spruce, the silver fir, the yew, the walnut, and the Indian horse-chestnut.

In the valley itself the exquisite plane-tree, the mulberry, the apricot, and the willow are perhaps the most familiar.

Kashmīr offers great attraction to the sportsman, and for its size the valley and the surrounding mountains possess a large and varied animal kingdom. A full account of the animals and birds will be found in *The Valley of Kashmīr*, chap. v. Since that book was written game preservation has made great strides, and has prevented the extinction of the *bārasingha* (*Cervus duvauceli*) and the *hangal* or Kashmīr stag (*C. cashmīrianus*). Among the *Cervidae*, the musk deer (*Moschus moschiferus*) is common and its pod is valuable. Of the family *Ursidae*, the black bear, or *bomba hāpat* (*Ursus torquatus*), is very common, being a great pest to the crops and a danger to the people. The brown bear, or *lāl hāpat* (*Ursus arctus* or *isabellinus*), is still far from rare. It is partly herbivorous and partly carnivorous. Of the family *Bovidae*, the *mārkhor* (*Capra falconeri*) and the ibex (*C. sibirica*) are still to be met with. The Kashmīr *mārkhor* has from one to two complete turns in the spirals of its horns. The *tahr* or *jagla* (*Hemitragus*) is found on the Pīr Panjāl, and the serow or *rāmu* (*Nemorhaedus bubalinus*) is fairly common. The *goral* (*Cemas goral*) also occurs.

There is a considerable variety of birds. The blue heron (*Ardea cinerea*) is very common, and fine heronries exist at several places. The heron's feathers are much valued, and the right to collect the feathers is farmed out. Among game-birds may be noticed the snow partridge (*Lerwa lerwa*), the Himālayan snow cock (*Tetraogallus himalayensis*), the *chikor* partridge (*Caccabis chukar*), the large grey quail (*Coturnix*), the *monal* pheasant (*Lophophorus refulgens*), the Simla horned pheasant (*Tragopan melanocephalum*), and the Kashmīr Pucras pheasant (*Pucrasia biddulphi*). The large sand-grouse (*Pterocles arenarius*) is occasionally seen. Pigeons, turtle-doves, rails, grebes, gulls, plovers, snipe, cranes, are common, and storks are sometimes seen. Geese are found in vast flocks on the Wular Lake in the winter, and there are at least thirteen kinds of duck. The goosander and smew are also found on the Wular Lake. There are six species of eagles, four of falcons, and four of owls. Kingfishers, hoopoes, bee eaters, night-jars, swifts, cuckoos, woodpeckers, parrots, crows in great variety, choughs, starlings, orioles, finches (12 species), buntings, larks, wagtails, creepers, tits, shrikes, warblers (14 species), thrushes (20 species), dippers, wrens, babbling thrushes, bulbuls, fly-catchers, and swallows are all familiar birds.

Among the reptiles there are two poisonous snakes, the *gunas* and the *pohur*, the bite of which is often fatal.

Fish forms an important item in the food of the Kashmīris. Vigne noticed only six different kinds, but Lawrence enumerated thirteen.

As the elevation varies from 1,200 feet at Jammu and 3,000 in the

Indus valley at Bunji and Chilās to 25,000 and 26,000 feet on the highest mountain peaks, the State presents an extraordinary variety of climatic conditions. The local variations of temperature depend chiefly upon situation (i.e. whether in a valley or on the crest of a mountain range), elevation, and the amount of the winter snowfall and the period and depth of the snow accumulation. The effect of position in a valley or a mountain crest is shown by comparing the temperatures of Murree and Srīnagar. The Murree observatory is about 1,200 feet higher than the Srīnagar observatory. The mean maximum day temperature in January at Murree is 7° higher than at Srīnagar, and the mean minimum night temperature 9° higher. On the other hand, in the hottest month (June) the maximum day temperature is 1° lower at Murree than at Srīnagar, while the minimum night temperatures are almost identical. The diurnal range is 2° less in January, 7° less in June, and 14° less in October at Murree than at Srīnagar. The slow movement of the air from the higher elevations into valleys more or less completely shut in by mountains tends to depress temperature at valley stations both by day and night considerably below that at similar elevations on the crest of the Outer Himālayas, and to increase the diurnal range most largely in the dry clear months of October and November, when the sinking down of the air from the adjacent mountains has its greatest effect, and is supplemented by rapid radiation from the ground. The effect of snow accumulation in valleys in reducing temperature is very marked. At Drās and Sonāmarg, where the accumulation is usually large, the solar heat on clear fine days in winter is utilized in melting the snow and hence exercises no influence on the air temperature. At Leh, where the ground is only occasionally concealed under a thin covering of snow, the sun even in winter usually warms the ground surface directly and thence the air. The cooling influence of snow accumulation at Drās and Sonāmarg is largely increased by the rapid radiation from the surface. The mean daily temperature is lowest in January and highest in June or July. At Srīnagar the mean temperature of January is 33·1°. The mean temperature of the hottest month (July) at Srīnagar is 74·6°. The mean temperature in January and August ranges from 25·3° to 75° at Skārdu, from 3·4° to 64·5° at Drās, from 17·7° to 61·8° at Leh, and from 36·6° to 85° (in July) at Gilgit. The most noteworthy features of the annual variation are the very rapid increase in March or April at the end of the winter, and an equally rapid decrease in October, when the skies clear after the south-west monsoon. The diurnal range is least at Gilgit (19·8°) and Srīnagar (22·4°) on the mean of the year, and greatest at Drās (31·4°) and Leh (26·3°).

The precipitation is received during two periods, the cold season from December to April, and the south-west monsoon period from June

to September. The rainfall in October and November is small in amount, and November is usually the driest month of the year. The cold-season precipitation from December to March is chiefly due to storms which advance from Persia and Baluchistān across Northern India. These disturbances occasionally give very stormy weather in Kashmīr, with violent winds on the higher elevations and much snow. The fall is large on the Pīr Panjāl range, being heaviest in January or February. In the valley and the mountain ranges to the north and east this is the chief precipitation of the year, and is very heavy on the first line of permanent snow, but decreases rapidly eastwards to the Karakoram range. The largest amount is received at Srīnagar, Drās, and Anantnāg in January. In the Karakoram region and the Tibetan plateau the winter fall is much later than on the outer ranges of the Himālayas, namely from March to May, and the maximum is received in April. The average depth of the snowfall at Srīnagar in an ordinary winter is about 8 feet. The snowfall at Sonāmarg in 1902 measured 13 feet and in 1903 about 30 feet. In April and May thunderstorms are of occasional occurrence in the valley and surrounding hills, giving light to moderate showers of rain. This hot-season rainfall is of considerable importance for cultivation in the valley. From June to November heavy rain falls on the Pīr Panjāl range, and in Jammu chiefly in the months of July, August, and September. The rainfall at Jammu and Punch is comparable with that of the submontane Districts of the Punjab. It is more moderate in amount in the valley, which receives a total of 9·4 inches, as compared with 35·7 inches at Pūnch and 26·8 inches at Domel. The precipitation is very light to the east of the first line of the snows bordering the valley on the east, and is about 2 inches in total amount at Gilgit, Skārdu, Kargil, and Leh. Thus the south-west monsoon is the predominant feature in Jammu and Kishtwār, while in Ladākh, Gilgit, and the higher ranges the cold-season precipitation is more important. Tables I and II on p. 144 show the average temperature and rainfall at Srīnagar and Leh for a series of years ending with 1905.

Earthquakes are not uncommon, and eleven accompanied by loss of life have been recorded since the fifteenth century. In 1885 shocks were felt from the end of May till the middle of August, and about 3,500 people were killed; fissures opened in the earth, and landslips occurred. Floods are also frequently mentioned in the histories of the country, the greatest following the obstruction of the Jhelum by the fall of a mountain in A.D. 879. The great flood of 1841 in the Indus caused much loss of life and damage to property. In 1893 very serious floods took place in the Jhelum owing to continuous rain for 52 hours, and much damage was done to Srīnagar. An inundation of a yet more serious character occurred in 1903.

History.

The early history of Kashmīr has been preserved in the celebrated *Rājataranginī*, by the poet Kalhana, who began to write in 1148. He gives a connected account of the history of the valley, which may be accepted as a trustworthy record from the middle of the ninth century onwards. Kalhana's work was continued by Jonarāja, who brought the history through the troubled times of the last Hindu dynasties, and the first Muhammadan rulers, to the time of the great Zain-ul-ābidīn, who ascended the throne in 1420. Another Sanskrit chronicler, Srivara, carries on the narrative to the accession of Fateh Shāh in 1486; and the last of the chronicles, the *Rājavalipataka*, brings the record down to 1586, when the valley was conquered by Akbar.

The current legend in Kashmīr relates that the valley was once covered by the waters of a mighty lake, on which the goddess Pārvatī sailed in a pleasure-boat from Harāmukh mountain in the north to the Konsanāg lake in the south. In her honour the lake was known as the Satīsar, or 'lake of the virtuous woman.' The country-side was harassed by a demon popularly known as Jaldeo, a corruption of Jalodbhava. Kāsyapa, the grandson of Brahmā, came to the rescue, but for some time the amphibious demon eluded him, hiding under the water. Vishnu then intervened and struck the mountains at Bāramūla with his trident. The waters of the lake rushed out, but the demon took refuge in the low ground near where Srīnagar now stands, and baffled pursuit. Then Pārvatī cast a mountain on him, and so destroyed the wicked Jaldeo. The mountain is known as Hara Parbat, and from ancient times the goddess has been worshipped on its slopes. When the demons had been routed, men visited the valley in the summer; and as the climate became milder they remained for the winter. Little kingdoms sprang up and the little kings quarrelled among themselves, with the usual result that a bigger king was called in to rule the country.

The *Rājataranginī* opens with the name of the glorious king of Kashmīr, Gonanda, 'worshipped by the region which Kailāsa lights up, and which the tossing Gangā clothes with a soft garment.' Nothing is known of the founder of the dynasty, though the genealogists of Jammu trace a direct descent from Gonanda to the present ruler. Mention is made of the pious Asoka and of his town, Srīnagar, with its ninety-six lakhs of houses resplendent with wealth. This town probably stood in the neighbourhood of the Takht-i-Sulaimān. Next come the three kings, Hushka, Jushka, and Kanishka, to be identified with Huvishka, Vāsudeva, and Kanishka, the Kushan rulers of Northern India at the beginning of the Christian era. According to the chronicles, in the days of these kings Kashmīr was in the possession of the Buddhists, and Buddhist tradition asserts that the third great council held by

Kanishka took place in Kashmīr. The Buddhist creed and the Brāhmanical cult seem to have existed peaceably side by side; but five hundred years later Hiuen Tsiang found the mass of the people Hindu, and the monasteries few and partly deserted. There is good reason to believe that the Kashmīris were, from the earliest period, chiefly Saivas.

About A.D. 528, Mihirakula, the king 'cruel as death,' ruled over Kashmīr. He was the leader of the White Huns or Ephthalites. The people still point to a ridge on the Pīr Panjāl range, Hastīvanj, where the king, to amuse himself, drove one hundred elephants over the precipice, enjoying their cries of agony. King Gopāditya was a pleasing contrast to the cruel king, and did much to raise the Brāhmans, and to advance their interests.

Pravarasena II reigned in the sixth century and, returning from his victorious campaigns abroad, built a magnificent city on the site of the present capital of Kashmīr. The city was known as Pravarapura, and is mentioned by Hiuen Tsiang at the time of his visit (A.D. 631) as the 'new city.' The site chosen has many advantages, strategic and commercial, but it is liable to floods. Many subsequent rulers endeavoured to move the site of the capital, but their efforts failed. Among these was the celebrated Lalitāditya, who ruled in the middle of the eighth century, and received an investiture from the emperor of China. A great and victorious soldier, he subdued the kings of India and invaded Central Asia. After twelve years of successful campaigning he returned to Kashmīr, enriched with spoil and accompanied by artisans from various countries, and built a magnificent city, Paraspur (Parihasapura). To give this new town pre-eminence, he burnt down Pravarapura. Lalitāditya also built the splendid temple of Mārtand. Before leaving for further conquests in Central Asia, from which he never returned, the king gave his subjects some excellent advice. He warns them against internal feuds, and says that if the forts are kept in repair and provisioned they need fear no foe. In a country shut in by mountains, discipline must be strict, and the cultivators must not be left with grain more than sufficient for a year's requirements. Cultivators should not be allowed to have more ploughs or cattle than are absolutely necessary, or they will trespass on their neighbours' fields. They should be repressed, and their style of living must be lower than that of the city people, or the latter will suffer. These words spoken some 1,200 years ago have never been forgotten; and rulers of various races and religions have followed Lalitāditya's policy, and sternly subordinated the interests of the cultivators to the comfort of the city.

Sankara Varman (883–902) was another great conqueror; and it is stated that, though Kashmīr had fallen off in population, he was able to lead out an army of 900,000 foot, 300 elephants, and 100,000 horse.

Sánkara Varman was avaricious and profligate. He plundered Paraspur in order to raise the fame of his own town, now known as Pattan.

There were signs of decay, and the last of the strong Hindu rulers was queen Didda (950–1003). Then followed the Lohara dynasty. Central authority was weakened, the country was a prey to civil war and violence, and the Damaras, skilled in burning, plundering, and fighting, harassed the valley. The last of this line was Jaya Simha, or Simha Deva (1128); and in his reign the Tartar, Khān Dalcha, invaded Kashmīr, and after great slaughter set fire to Srīnagar. He subsequently perished in the passes on his retreat from Kashmīr, overtaken by snow. Rām Chand, the commander-in-chief of the Kashmīr army, had meanwhile kept up some semblance of authority in the valley, and had routed the Gaddis from Kishtwār. With Rām Chand were two soldiers of fortune, Rainchan Shāh from Tibet and Shāh Mirza from Swāt.

Rainchan Shāh quarrelled with Rām Chand, and with the assistance of the Ladākhis attacked and killed him. He married Kuta Rānī, the daughter of Rām Chand, and embracing Islām became the first Muhammadan king of Kashmīr, but died after a short reign of two and a half years. At this juncture Udayanadeva appeared, who was the brother of Rājā Simha Deva and had fled to Kishtwār. He married the widow, Kuta Rānī, and reigned for fifteen years. On his death Kuta Rānī assumed power for a short time, and committed suicide rather than marry Shāh Mirza, who now declared himself king. He was the first of the line known as Salātīn-i-Kashmīr, and took the name of Shams-ud dīn. In 1394 Sultān Sikandar, known for his fierce zeal as *Butshikan* or 'iconoclast,' was king of Kashmīr. He was a gloomy fanatic, and destroyed nearly all the grand buildings and temples of his Hindu predecessors. To the people he offered death, conversion, or exile. Many fled; many were converted to Islām; many were killed, and it is said that Sikandar burnt seven maunds of sacred threads worn by the murdered Brāhmans. By the end of his reign all Hindu inhabitants of the valley, except the Brāhmans, had probably adopted Islām.

In 1420 Zain-ul-ābidīn succeeded. He was wise, virtuous, and frugal, and very tolerant to the Brāhmans. He remitted the poll-tax on Hindus, encouraged the Brāhmans to learn Persian, repaired some of the Hindu temples, and revived Hindu learning. Hitherto in Kashmīr Sanskrit had been written in Sarada, an older sister of the Devanāgarī character. The introduction of Persian, as the official language, divided the Brāhmans into three subdivisions: the Kārkuns, who entered official life; the Bāchabatts, who discharged the function of the priesthood; and the Pandits, who devoted themselves to Sanskrit learning. Towards the end of this good and useful reign the

Chakks sprang into mischievous prominence. Zain-ul-ābidīn drove them out of the valley, but in the time of his weak successors they returned and eventually seized the government of Kashmīr. Turbulent and brave, the Chakks were not fitted for administration. Yākūb Khān, the last of the line, offered a stubborn resistance to Akbar, and with the help of the Bambās and Khakhās routed the Mughal on his first attempt on the valley (1582). But later, not without difficulty and some reverses, Kashmīr was finally conquered (1586)[1].

Akbar visited the valley three times. He built a strong fort on the slopes of the Hara Parbat, paying high wages, and dispensing with forced labour. His revenue minister, Todar Mal, made a very summary record of the fiscal conditions of the valley. Jahāngīr was greatly attached to Kashmīr. He laid out lovely pleasure-gardens; around the Dal Lake were 777 gardens, yielding a revenue of 1 lakh from roses and bed musk. Much depended on the character of the governors. Alī Mardān Khān, the best of these, built a splendid series of *sarais* on the Pīr Panjāl route to India, and grappled with a famine with energy and success. Aurangzeb visited the valley only once; but in that brief time he showed his zeal against the unbelievers, and his name is still execrated by the Brāhmans. Then followed the disorder of decay, and in 1751 the *Sūbah* of Kashmīr was practically independent of Delhi.

From the following year the unfortunate Kashmīris experienced the cruel oppression of Afghān rule, the short but evil period of the Durrānis. Governors from Kābul plundered and tortured the people indiscriminately, but reserved their worst cruelties for the Brāhmans, the Shiahs, and the Bambās of the Jhelum valley. In their agony the people of Kashmīr turned with hope to the rising power of Ranjīt Singh of Lahore. In 1814 a Sikh army advanced by the Pīr Panjāl, Ranjīt Singh watching the operations from Pūnch. This expedition miscarried; but in 1819 Misr Dīwān Chand, Ranjīt Singh's great general, accompanied by Gulāb Singh of Jammu, overcame Muhammad Azīm Khān, and entered Shupiyan. In comparison with the Afghāns, the Sikhs came as a relief to the unfortunate Kashmīris, but their rule was harsh and oppressive.

Sher Singh, the reputed son of Ranjīt Singh, was a weak governor, and his name is remembered in connexion with the terrible famine which visited the valley. The best of the Sikh governors was Colonel Miān Singh (1833), who is still spoken of with gratitude, and did his best to repair the ravages of the famine. He was murdered by

[1] Kashmīr had been attacked from the side of Ladākh by Mirzā Haidar (the author of the *Tārīkh-i-Rashīdī*) in 1532, and again invaded from the south in 1540, and ruled by him (nominally on behalf of the emperor Humāyūn) until his death eleven years later.

mutinous soldiers, and was succeeded by Shaikh Ghulām Muhī-ud-dīn in 1842. During his government the Bambās, under Sher Ahmad, inflicted great losses on the Sikhs. In 1845 Imām-ud-dīn succeeded his father as governor.

The history of the State, as at present constituted, is practically the history of one man, a Dogrā Rājput, Gulāb Singh of Jammu. Lying off the high roads of India, and away from the fertile plains of the Punjab, the barren hills of the Dogrās had not attracted the notice of the Mughal invaders of India. Here lived a number of petty Rājās, and it appears that from very early times the little kingdom of Jammu was locally of some importance. Towards the end of the eighteenth century the power of the Jammu ruler had extended east as far as the Rāvi, and west to the Chenāb; but the power waned and waxed according to the fortunes of petty and chronic warfare. To the east, at Basoli and Kishtwār, were independent Rājput chiefs, while to the north-west were the Muhammadan rulers of Bhimbar and Rājaori, descendants of Hindu Rājputs. These two states lay on the Mughal route to Kashmīr, and so came under the influence of Delhi. Up the Jhelum valley, the country was held by small independent Muhammadan chiefs, whose title of Rājā suggests their Hindu origin.

About the middle of the eighteenth century Rājā Ranjīt Deo was the ruler of Jammu. He was a man of some mark, and his capital flourished; but at his death about 1780, his three sons quarrelled. The Sikhs were invoked, and Jammu was plundered. From Ranjīt Deo's death to 1846, the Dogrā country became tributary to the Sikh power. Gulāb Singh, Dhyān Singh, and Suchet Singh were the great-grandsons of Sūrat Singh, youngest brother of Ranjīt Deo. They were soldiers of fortune, and as young men sought service at the court of Ranjīt Singh of Lahore. They rapidly distinguished themselves; and Gulāb Singh, for his service in capturing the Rājā of Rājaori, who was fighting the Sikhs, was created Rājā of Jammu in 1820. Dhyān Singh obtained the principality of Pūnch, a hilly country between the Jhelum and the Pīr Panjāl range, north of Rājaori; while Suchet Singh received Rāmnagar, west-by-north of Jammu.

Ranjīt Singh had found that the control of the Dogrā country was a difficult task, and his policy of enlisting the services of able Dogrās was at once obvious and prudent. The country was disturbed, each man plundered his neighbour, and Gulāb Singh's energies were taxed to the utmost in restoring order. He was a man of extraordinary power, and very quickly asserted his authority. His methods were often cruel and unscrupulous, but allowances must be made. He believed in object-lessons, and his penal system was at any rate successful in ridding the country of crime. He kept a sharp eye on his officials, and a close hand on his revenues. Rapidly absorbing the

power and possessions of the feudal chiefs around him, after ten years of laborious and consistent effort he and his two brothers became masters of nearly all the country between Kashmīr and the Punjab, save Rājaori. Bhadarwāh fell easily into the hands of Gulāb Singh after a slight resistance. In Kishtwār, the minister, Wazīr Lakhpat, quarrelled with the Rājā and sought the assistance of Gulāb Singh, who at once moved up with a force, and the Rājā surrendered his country without fighting.

His easy successes in Kishtwār, which commanded two of the roads into Ladākh, probably suggested the ambitious idea of the conquest of that unknown land. The difficulties of access offered by mountains and glaciers were enormous; but the brave Dogrās under Gulāb Singh's officer, Zorāwar Singh, never hesitated, and in two campaigns the whole of Ladākh passed into the hands of the Jammu State. It is interesting to notice that the Dogrās did not pillage the rich monastery of Himis, which saved itself by allowing the army in ignorance of its locality to pass the gorge leading to the Himis valley, and then sending a deputation with an offer of free rations while in Ladākh territory. The agreement made was respected by both parties.

A few years later, in 1840, Zorāwar Singh invaded Baltistān, captured the Rājā of Skārdu, who had sided with the Ladākhis, and annexed his country. The following year (1841) Zorāwar Singh while invading Tibet was overtaken by winter, and, being attacked when his troops were disabled by cold, perished with nearly all his army. Whether it was policy or whether it was accident, by 1840 Gulāb Singh had encircled Kashmīr.

In the winter of 1845 war broke out between the British and the Sikhs. Gulāb Singh contrived to hold himself aloof till the battle of Sobraon (1846), when he appeared as a useful mediator and the trusted adviser of Sir Henry Lawrence. Two treaties were concluded. By the first the State of Lahore handed over to the British, as equivalent for one crore of indemnity, the hill countries between the rivers Beās and the Indus; by the second the British made over to Gulab Singh for 75 lakhs all the hilly or mountainous country situated to the east of the Indus and west of the Rāvi. Kashmīr did not, however, come into the Mahārājā's hands without fighting. Imām-ud din, the Sikh governor, aided by the restless Bambās from the Jhelum valley, routed Gulāb Singh's troops on the outskirts of Srīnagar, killing Wazīr Lakhpat. Owing, however, to the mediation of Sir Henry Lawrence, Imām-ud-dīn desisted from opposition and Kashmīr passed without further disturbances to the new ruler. At Astor and Gilgit the Dogrā troops relieved the Sikhs, Nathu Shāh, the Sikh commander, taking service under Gulāb Singh. Not long afterwards the Hunza Rājā attacked Gilgit territory. Nathu Shah retorted by leading a force to

attack the Hunza valley; he and his force were destroyed, and Gilgit fort fell into the hands of the Hunza Rājā, along with Punial, Yāsīn, and Darel. The Mahārājā sent two columns, one from Astor and one from Baltistān, and after some fighting Gilgit fort was recovered. In 1852, partly by strategy, partly by treachery, the Dogrā troops were annihilated by the bloodthirsty Gaur Rahmān of Yāsīn, and for eight years the Indus formed the boundary of the Mahārājā's territories.

Gulāb Singh died in 1857; and when his successor, Ranbīr Singh, had recovered from the strain caused by the Mutiny, in which he had loyally sided with the British, he determined to recover Gilgit, and to rehabilitate the reputation of the Dogrās on the frontier. In 1860 a force under Devi Singh crossed the Indus, and advanced on Gaur Rahmān's strong fort at Gilgit. Gaur Rahmān had died just before the arrival of the Dogrās. The fort was taken; and since then the Mahārājās of Jammu and Kashmīr have held it. to their heavy cost and somewhat doubtful advantage.

Ranbīr Singh was a model Hindu: devoted to his religion and to Sanskrit learning, but tolerant of other creeds. He was in many ways an enlightened man, but he lacked his father's strong will and determination, and his control over the State officials was weak. The latter part of his life was darkened by the dreadful famine in Kashmīr, 1877–9; and in September, 1885, he was succeeded by his eldest son, the present Mahārājā Pratāp Singh, G.C.S.I. He bears the hereditary title of Mahārājā, and receives a salute of 19 guns, increased to 21 in his own territory.

Through all these vicissitudes of government and changes in religion the Kashmīri has remained unaltered. Mughal, Afghān, Sikh, and Dogrā have left no impression on the national character; and at heart the people of the valley are Hindus, as they were before the time of Sikandar Shāh. The isolation from the outer world accounts for this stable unchanging nationality, and passages in the *Rājataranginī* show that the main features of the national character were the same in the early period of Hindu rule as they are now.

The valley of Kashmīr is holy land, and everywhere one finds remains of ancient temples and buildings called by the present inhabitants, though without historical foundation, Pāndavlari, 'the houses of the Pāndavas.' These ancient buildings, though more or less injured by iconoclasts, vandal builders, earthquakes, and, as Cunningham thinks, by gunpowder, are composed of a blue limestone capable of taking the highest polish, and of great solidity. They defy weather and time, while the later works of the Mughals, the mosques of Aurangzeb and the pleasure-places of Salīm and Nūr Mahal, are crumbling away and possess little or none of their pristine beauty.

The Hindu buildings of Kashmīr have been described by Sir

Alexander Cunningham and Mr. F. S. Growse[1]. They exhibit traces of the influence of Grecian art, and are distinguished by the graceful elegance of their outlines, by the massive boldness of their parts, and by the happy propriety of their decorations. Characteristic features are the lofty pyramidal roofs, trefoiled doorways covered by pyramidal pediments, and the great width of the space between columns.

Among the numerous temples two may be noticed—Mārtand and Payech—the first for its grandeur, and the second for its excellent preservation. Mārtand, the Temple of the Sun, stands on a sloping *karewa*, about 3 miles east of Islāmābād, overlooking the finest view in Kashmīr. The great structure was built by Lalitāditya in the eighth century. Kalasa came here at the approach of death and expired at the feet of the sacred image (1089). In the time of Kalhana the chronicler, the great quadrangular courtyard was used as a fortification, and the sacred image is said to have been destroyed by Sikandar, the iconoclast.

The building consists of one lofty central edifice, with a small detached wing on each side of the entrance, the whole standing in a large quadrangle surrounded by a colonnade of eighty-four pillars with intervening trefoil-headed recesses. The length of the outer side of the wall, which is blank, is about 90 yards; that of the front is about 56 yards. The central building is 63 feet in length by 36 feet in width, and, alone of all the temples of Kashmīr, possesses, in addition to the cella or sanctuary, a choir and nave, termed in Sanskrit the *antarāla* and *arddhamandapa*; the nave is 18 feet square. The sanctuary alone is left entirely bare, the two other compartments being lined with rich panellings and sculptured niches. As the main building is at present entirely uncovered, the original form of the roof can be determined only by a reference to other temples and to the general form and character of the various parts of the Mārtand temple itself. It has been conjectured that the roof was pyramidal, and that the entrance chamber and wings were similarly covered. There would thus have been four distinct pyramids, of which that over the inner chamber must have been the loftiest, the height of its pinnacle above the ground being about 75 feet.

The interior must have been as imposing as the exterior. On ascending the flight of steps, now covered by ruins, the votary entered a highly decorated chamber, with a doorway on each side covered by a pediment, with a trefoil-headed niche containing a bust of the Hindu triad, and on the flanks of the main entrance, as well as on those of the side doorways, were pointed and trefoil niches, each of which held a statue of a Hindu deity. The interior decorations of the roof can only be determined conjecturally, as there do not appear to be any

[1] *Calcutta Review*, No. CVII.

ornamented stones that could with certainty be assigned to it. Baron Hügel doubts whether Mārtand ever had a roof; but as the walls of the temple are still standing, the numerous heaps of large stones that are scattered about on all sides suggest the idea that these belonged to the roof. Fergusson, however, thought that the roof was of wood.

Payech lies about 19 miles from Srīnagar under the Naunagri *karewa*, about 6 miles from the left bank of the Jhelum river. On the south side of the village, situated in a small green space near the bank of the stream surrounded by a few walnut and willow trees, stands an ancient temple, which in intrinsic beauty and elegance of outline is superior to all the existing remains in Kashmīr of similar dimensions. Its excellent preservation may probably be explained by its retired situation at the foot of the high table-land, which separates it by an interval of 5 or 6 miles from the bank of the Jhelum, and by the marvellous solidity of its construction. The cella, which is 8 feet square, and has an open doorway on each of the four sides, is composed of only ten stones, the four corners being each a single stone, the sculptured tympanums over the doorways four others, while two more compose the pyramid roof, the lower of these being an enormous mass, 8 feet square by 4 feet in height. It has been ascribed by Sir Alexander Cunningham, on grounds which, in the absence of any positive authority either way, may be taken as adequate, to Narendrāditya, who reigned from 483 to 490. Fergusson, however, considered that the temple belongs to the thirteenth century. The sculptures over the doorways are coarsely executed in comparison with the artistic finish of the purely architectural details, and are much defaced, but apparently represent Brahmā, Vishnu, Siva, and the goddess Durgā. The building is said to be dedicated to Vishnu as Sūrya or the Sun-god. Inside the cupola is rayed, so as to represent the sun; and at each corner of the square the space intervening between the angle and the line of the circle is filled up with a *jinn* or attendant, who seems to be sporting at the edge of its rays. The roof has been partly displaced, which is said to have been the result of an attempt made to take it down and remove it to the city. The interior is still occupied by a large stone *lingam*.

Population.

Table III at the end of this article (p. 145) shows the distribution of population in 1901. An estimate of the number of inhabitants was made in 1873, but the first regular Census was taken in 1891. In that year the population was 2,543,952, and it rose to 2,905,578 in 1901, or by 14 per cent. To a considerable extent the increase was due to improved enumeration, as for example in Gilgit, where the number recorded rose from 16,769 to 60,885. The increase amounted to 22 per cent. in the Kashmīr province, compared with only 6 per cent. in Jammu. The density of population in the

whole State is 36 persons per square mile. Details of the area of subdivisions are not available, but the density per square mile of land under cultivation varies from 64 in Muzaffarābād district to 1,295 in Gilgit, where cultivable land is scarce. There are only two towns of any size, JAMMU (36,130) and SRĪNAGAR (122,618); but the State contains 8,946 villages. Nearly half the total population live in villages with a population of less than 500 each. Formerly, considerable numbers of Kashmīris emigrated to the Punjab, but the census results in that Province show that only 83,240 persons born in Kashmīr were enumerated there in 1901, compared with 111,775 in 1881. Statistics of age are, as usual, unreliable, and need not be referred to in detail. In the whole State there are 884 females to 1,000 males, the proportion being highest in the frontier tracts (933) and lowest in Kashmīr province (876). These results point to defective enumeration of females. Marriage is comparatively late, and less than 1 per cent. of the males under fifteen years, and about 2 per cent. of the females of the same age, are married. Taking the whole population, 53 per cent. of males and 39 per cent. of females are married. Polyandry is prevalent in Ladākh. About 34 per cent. of the population speak Kashmīrī, and 15 per cent. Dogrī, while Punjābi is the tongue of nearly 30 per cent. A great variety of languages are used, in various parts of the State, by comparatively small numbers. Agriculture supports 54 per cent. of the total, and weaving and allied arts 2 per cent.

The total population includes 2,154,695 Muhammadans, 689,073 Hindus, 25,828 Sikhs, and 35,047 Buddhists. The Hindus are found chiefly in the Jammu province, where they form rather less than half the total. In the Kashmīr province they represent only 524 in every 10,000 of population, and in the frontier *wazārats* of Ladākh and Gilgit only 97 out of every 10,000 persons.

Among the Hindus of the Jammu province, who number 626,177, the most important castes are the Brāhmans (186,000), the Rājputs (167,000), the Khattrīs (48,000), and the Thakkars (93,000). Each caste is subdivided into many sub-castes; but for practical purposes the Dogrā Rājputs do not regard the finer divisions of the ethnologist, but draw a broad distinction between the Miān Rājputs who engage in neither trade nor agriculture, and the other Rājputs who have condescended to work for their living. The Miāns will marry the daughters of the latter class, but will not give their own daughters in marriage to them. They have territorial names, such as Jamwāl and Jasrotia, signifying that the family is connected with Jammu and Jasrota. They mostly hold land on pepper-corn rents, cultivated by others, who take a share of the crops. The Miān Rājput gladly serves as a soldier, by choice in the cavalry, and if there is not room for him in the Mahārājā's forces, he will enlist in the Indian army. In the Hunza-Nagar campaign

and at Chitrāl the Dogrā Rājput worthily maintained his ancient reputation. As a soldier he is admirable, but as a landowner evil days are in store for him. The agriculture of the Dogrā country is uncertain, and not over-profitable; and in the course of years the proud, gallant, and thriftless Rājput will be ousted by the sturdy Thakkars and Jats (Musalmān, 123,000; Hindu, 25,000). The Rājputs are a handsome race, wiry and active. They observe caste rules very strictly. Female infanticide was the common rule in the memory of men still middle-aged, and the *sati* of Rājā Suchet Singh's ladies is still remembered by the old men. The Khattrīs are an important people, keen and clever. They are the financiers and officials of the State, and some of the best servants of the Mahārājā have been Dogrā Khattrīs.

The origin of the word 'Dogrā' is commonly stated by the people themselves to have arisen from the fact that the cradle of the Dogrā race lies between the two holy lakes, Saroin Sar and Mān Sar, not far from Jammu. Drigartdesh, or the 'country of the two hollows,' was corrupted into Dūgar, and Dūgra became Dogrā. From Jammu stretching east along the plains of the Punjab the country is Dogrā; and all who live in that tract, whether they be Hindus, Musalmāns, or Sikhs, whether high-born Rājputs or low-born menials, are known as Dogrās, and have certain national characteristics and a common tongue, which differentiate them from any of the other peoples of India. Some authorities doubt this derivation, and say that Dogrā is a corruption of the Rājasthānī word for 'hills' (*dungar*), and that when the Rājputs forced their way up north they gave this name to the hilly country.

The Dogrās hold the tract of lowland country along the British border, and the outer ranges of hills from the Manawar or Malikāni Tāwi on the west to the Rāvi river on the south-east, which is bounded towards the higher mountains by a line drawn along the hills to the south of the Budil *ilāka* through Batoti and thence to the Rāvi river north-east of Basoli. From the Manawar Tāwi to the Jhelum is the country known as Chibhāl, the home of the Chibs. The Chibs are mostly Musalmān, but there are Hindu Chibs as well. Both trace their origin to a Rājput chief, named Jassu. Dharam Chand, a descendant of Jassu, was versed in medicine, and was summoned to Delhi to attend Jahāngīr. The fee in case of success was the emperor's daughter. Dharam Chand was successful: he married the Mughal princess, and was known henceforth as Shādi Khān. But he longed for his country and left his bride, and the next year the Mughals invaded his country and slew Shādi Khān.

The Hindu Chibs are descended from Shādi Khān by his Hindu wife, while the Muhammadan Chibs are the progeny of his family subsequent to their acceptance of Islām. Both Hindu and Musal-

mān Chibs repair annually to the tomb of Shādi Khān at a place in the Kālī Dhar hills in the Naoshera *tahsil.* Like the Dogrā Rājputs, the Chibs look upon service as the sole career for a man, but both Hindus and Musalmāns till the soil. They are a fighting people, and the spirit of adventure takes them out of their own country. They follow the caste rules of the Hindu Rājputs, but are perhaps stronger and more muscular than the Dogrās to the east. Besides the Chibs, there are Musalmān Rājputs to the west of the Chenāb—the Jarals, the Bhaos (unfavourably known in Akhnūr), the Gakhars, and many others. It should be noticed that the Hindu Chibs give their daughters in marriage to the ruling family of Jammu and Kashmīr.

Drew, in his book *Jammu and Kashmīr Territories*, suggests that the Bambās and Khakhās of the Jhelum valley might be classed under the head Chibhāli. Very little is known as to when these people migrated into Muzaffarābād and Uri districts, or whence they came; but it is generally admitted that they had a foreign origin. It is probable that the Khakhās have occupied the country on the left bank of the Jhelum for 300 years or more, and that the Bambās, who live on the right bank of the river, came in yet earlier. The Khakhās, who enjoy the proud title of Rājā, are, like the Chibs, Musalmān Rājputs, and trace their descent to Rājā Mal Rāthor. They regard themselves as belonging to the Janjuah tribe. The Bambās, who are styled Sultāns, deprecate a Hindu origin. They claim to belong to the Kureshi tribe, and say that the name Bambā is a corruption of Bāri-Hāshim, and that they are descended from Alī, the son in-law of Muhammad The Khakhās and Bambās have a privileged status in the Jhelum valley, and their power has varied according to the weakness or strength of the central authority. Under the Afghāns, the Khakhās and Bambās paid little to their overlord, and were practically independent. The Sikhs tightened their hold over the Jhelum valley, but the Khakhās and Bambās retained certain privileges.

Numerically the Gūjars are of some importance, both in Jammu, where they number 151,700, and in Kashmīr, where they are returned at 125,650. Some of them have settled down to agriculture; but the great majority are herdsmen, and in the summer months move up to the splendid grazing-grounds above the forests with their buffaloes and goats. They are Musalmāns by religion, and many of the Gūjar tribes speak a dialect of their own known as Parimu. They are a fine tall race of men, with rather stupid faces and large prominent teeth. They sacrifice every consideration for their buffaloes, and even in their cultivation, chiefly maize, their first thought is for these animals. They are ignorant, inoffensive, and simple, and their good faith is proverbial. Kashmīr and its mountains have especial attractions for the Gūjars;

but as forest conservancy extends, these born enemies of the forest will find Kashmīr less attractive.

Another pastoral semi-nomad people are the Gaddis (5,927) of Kishtwār. They graze large flocks of sheep and goats, moving up the mountains as the summer draws on, and returning to the low country when the first snow falls. Their homes are in the high pastures, but they are for most part of the year roving, though in some places there are regular settled villages of Gaddis. They are Hindus. They wear duffel clothes and a very peculiar hat of stiff cloth. All speak well of the Gaddis, and they are a popular people, welcome everywhere.

In the Kashmīr province, out of a total population of 1,157,394, Muhammadans number 1,083,766, Hindus 60,682, and Sikhs 12,637. The Census, however, was taken in the winter, when many of the resident population were away working in the Punjab.

The Kashmīri is unchanged, in spite of the splendid Mughal, the brutal Afghān, and the bully Sikh. Warriors and statesmen came and went; but there was no egress, and no wish on the part of the Kashmīris in normal times to leave their home. The outside world was far, and from all accounts inferior to the pleasant valley, and at each of the gates of the valley were soldiers who demanded fees. So the Kashmīris lived their self-centred life, conceited, clever, and conservative.

Islām came in on a strong wave, on which rode a fanatical king and a missionary saint, and history records that the Kashmīris became Musalmāns. But close observers of the country see that the so-called Musalmāns are still Hindus at heart. Their shrines are on the exact spots where the old Hindu *sthāns* stood, and these receive an attention which is not vouchsafed to the squalid mosques and the mean *mullās*. The Kashmīris do not flock to Mecca, and religious men from Arabia have spoken in strong terms of the apathy of these tepid Musalmāns. There are many shrines, shrines of the Rishis, the Bābas, and the Makhdūm Sāhib Pīrzādas, known as the Wāmi or 'national,' as distinguished from the Saiyids and Saiyid Pīrzādas who are foreigners. And as in religion, so in social evolution, there has been little change up to recent times in the people of Kashmīr. Peculiarities noticed in the *Rājatarangini* still mark the national character. Witchcraft and sorcery are rampant now as they were in the times of the Hindu kings.

The Musalmāns of Kashmīr may be divided into four divisions: Shaikhs, Saiyids, Mughals, and Pathāns. The Shaikhs, who are by far the most numerous, are the descendants of Hindus, but have retained none of the caste rules of their forefathers. They have clan names known as *krām*; but a man of the Tantre *krām* may marry a girl of the same *krām*, or a maiden of some other *krām*, provided she be one of the agricultural families. The only line drawn is that a man of the Shaikh *krām* may not marry a Saiyid girl, nor must he demean himself

by an alliance with the daughter of a market-gardener or a menial. Some hold that the *krāms* known as Pandit, Kol, Bat, Aitu, Rishi, Mantu, and Ganai are descended from the Brāhmans, and that the Magres, Tantres, Dars, Dangars, Rainas, Rāthors, Thākurs, and Naiks are sprung from a Kshattriya origin. The Lon *krām* is assigned a Vaisya descent, and the Dāmars are connected with Sūdras. There may be some foundation for these theories; but the *krāms* are now mixed, and confusion is increasing owing to the fashion of the lower castes who arrogate the *krāms* of the respectable families. Thus the Dums, the gardeners, and the butchers have begun to call themselves Ganais, much to the annoyance of the true Ganais. And the boatmen, a most disreputable community, have appropriated the *krām* name of Dar. The social system is very plastic, and prosperity and a very little wealth soon obliterate a humble origin.

The Saiyids may be divided into those who follow the profession of religion and those who have taken to agriculture and other pursuits. In appearance, manners, and language there is nothing to distinguish them from other Kashmīri Musalmāns. Their *krām* name is Mīr. While a Saiyid retains his saintly profession Mīr is a prefix; if he has taken to agriculture, Mīr is an affix to his name. The Saiyid Makār fraternity are fraudulent *fakīrs* who pretend to be Saiyids and wander about Kashmīr and India, cheating the public. Many have now taken to trade. They intermarry among themselves.

The Mughals are not numerous. Their *krām* names are Mīr (a corruption of Mirza), Beg, Bandi, Bach, and Ashaye.

The Pathāns are more numerous than the Mughals, and are found chiefly in the south-west of the valley, where Pathān colonies have from time to time been founded. The most interesting of these colonies is that of the Kuki-Khel Afrīdis at Dranghaihama, who retain all the old customs and speak Pashtū. They wear a picturesque dress, and carry swords and shields. They pride themselves on their bravery, and in the absence of the nobler foe engage the bear on foot with the sword or spear him from their plucky little ponies. The Afrīdis and the Machipurias who belong to the Yūsufzai tribe are liable to military service, in return for which they hold certain villages free of revenue. The Pathāns chiefly came in under the Durrānis, but many were brought by Mahārājā Gulāb Singh for service on the frontier. They are rapidly adopting Kashmīri habits.

Several villages are held by *fakīrs* or professional beggars. They work as agriculturists in the summer, and beg in the winter. They are proud of their profession and are liked by the people. They intermarry with other beggar families or *Bechānwols*. These various tribes are scattered broadcast over the valley and possess no marked distinctive features.

The dividing line in society is between the *zamīndārs* or agricultural

families and the *taifadārs*, that is, the market-gardeners, herdsmen, shepherds, boatmen, minstrels, leather-workers, and the menial servants of the villagers. No *zamīndār* would intermarry with a *taifadār*. For the most part it is difficult to trace any difference in physiognomy between the two classes, though there is often a difference in dress. But the Dum, the Galawān, and the Bātal or Wātal are easy to distinguish from other tribes. They have a darker skin, and the Dum has the restless, furtive eye so characteristic of the thief.

The Dums are a very important people in Kashmīr, for they are the watchmen of the villages and formerly used to look after the State share of the crops. As a private citizen the Dum is not an admirable person, and he loses no opportunity of annoying the villagers, by whom he is feared and disliked. But as officials they are trustworthy, and have never been known to steal the State treasure which passes through their hands. The Dums claim descent from a Hindu king, who from fear of his numerous sons scattered them over the valley, but some say that they are descendants of the Chakks, mentioned under History.

The Galawāns or horse-keepers are also credited with a descent from the Chakks, and their violent restless character may be hereditary. Originally they earned their living by grazing ponies, but found it more lucrative to steal them. At last they became an established criminal tribe, and during Sikh rule were a terror to the country. Khaira Galawān, the hero of many a legend, was killed by the Sikh governor Miān Singh. Gulāb Singh hunted down the tribe, and their end was transportation to Bunji.

The Bātals or Wātals have been called the gipsies of Kashmīr, and are a peculiar people with a *patois* of their own. They may be divided into two classes. Those who abstain from eating carrion and are admitted to the mosque and to the Musalmān religion form the first class; those who eat the flesh of dead animals and are excluded from the mosque form the second. They are wanderers, and though they sometimes settle in wattled huts on the outskirts of a village, they soon move on. Their chief occupation is the manufacture of leather. The first class make boots and sandals; the second class make winnowing trays of leather and straw, and do scavenger's work. They also rear poultry and rob hen-roosts. Their women are of fine stature and handsome, and they often drift into the city, where they become singers and dancers. Once a year the Bātals from all parts of the valley flock to Lāla Bāb's shrine near the Dal Lake, and many matters affecting the tribe are then settled.

The Bhānds or minstrels are a peculiar people. They combine the profession of singing and acting with that of begging; and they travel great distances, often visiting the Punjab, where they perform to Kashmīri audiences. They are excellent actors, clever at improvi-

sation and fearless as to its results. They are a very pleasant people, and their mirth and good humour form an agreeable contrast to the chronic gloom of the Kashmīri peasant.

The Hānz or boatmen claim a Vaisya origin, and even now when blaming one of the crew for his bad paddling the captain will say: 'You are a Sūdra.' They always claim Noah as their ancestor; but some accounts point to a gipsy origin. The father of the family is an autocrat, and his discipline on board is often of a violent character. There are many sections of the tribe. First rank the half-amphibious paddlers of the Dal Lake (Demb Hānz), who are really vegetable gardeners, and the boatmen of the Wular Lake, who gather the *singhāra* nut (Gari Hānz). Next in status come the men of the large barges known as *bahats* and *wār*, in which cargoes of 800 maunds of grain or wood are carried. Then the Dunga Hānz, who paddle the passenger boats, not a respectable class, for they prostitute their females; next the Gad Hānz, who net fish, and are said to surpass even the Dunga Hānz in their power of invective; and last the Hak Hānz, who collect drift-wood in the rivers. The Hānz or Hānjis are a hardy muscular people, but are quarrelsome and mendacious. Half the stories to the discredit of Kashmīr and its inhabitants are due to the fertile imagination of the Hānji, who after the manner of the Irish car-driver tells travellers quaint scandals of the valley and its rulers. The Hānji ashore is a great rascal, and European travellers would be wise to leave him in his boat. The chief *krām* names of the Hānjis are Dangar, Dar, and Mal.

The menial servants (Nāngār) of the villages are carpenters, blacksmiths, potters, weavers, butchers, washermen, barbers, tailors, bakers, goldsmiths, carriers, oil-pressers, dyers, milkmen, cotton-cleaners, and snuff-makers. Many of the Nāngārs have taken to agriculture, and most of them are extremely independent of their so-called masters. The only class of menials who apparently cannot take to agriculture are the weavers. Their soft hands and weak knees make field-work an impossibility.

The Hindus are with few exceptions Brāhmans, and are commonly known as Pandits. They fall into three classes: astrologers (*Jyotishī*), priests (*Gurū* or *Bāchabatt*), writers and clerks (*Kārkun*). The priest class do not intermarry with the others, but the *Jyotishī* and *Kārkun* classes intermarry.

The astrologers are learned in the *shāstras* and expound them, and they draw up the calendars in which prophecies are made as to the events of the coming year. The priests perform the rites and ceremonies of the Hindu religion. But the vast majority of the Brāhmans belong to the *Kārkun* class. Formerly they obtained employment from the State, but recently they have taken to business, and some

work as cooks, bakers, confectioners, and tailors. The only occupations forbidden to a Pandit are those of the cobbler, potter, corn-frier, porter, boatman, carpenter, mason, and fruit-seller. Many Pandits have taken to agriculture; but the city Brāhmans look down on any profession save that of writing, and they would never think of marrying a daughter to a Pandit cultivator. They have no real aptitude for business, or they might have found great openings in trade at Srīnagar under the new régime. They cling to the city, and if they obtain employment outside they leave their wives and families behind them. They are a handsome race of men, with fine well-cut features, small hands and feet, and graceful figures. Their women are fair and good-looking, more refined than the Musalmāns. The children are extremely pretty.

The Pandits are broken up into numerous *gotras*; but though the Pandit repeats the name of his *gotra* seven times as he performs his ablutions, the outside world knows him only by his *krām*. Marriage within the *gotra* is forbidden, and the Kashmīri Pandits do not intermarry with the Brāhmans of India. Among the leading *krāms* may be mentioned the following: Tiku, Razdan, Kak, Munshi, Mathu, Kāchru Pandit, Sapru, Bhan, Zitshu, Raina, Dar, Fotadār, Madan, Thusu, Wangnu, Mujju, Hokhu, and Dulu. The descendants of the Brāhmans, said to be only eleven families, who survived the persecutions of Sikandar Shāh and remained in the valley, are known as Malmās. The others, descended from returned fugitives, are called Banamas.

There are a few Khattrīs, known as Bohras in Srīnagar, engaged in trade and shop-keeping. They enjoy no caste fellowship with the Pandits, though in old days instances are known of a Khattrī being admitted to caste by the Brāhmans.

The Sikhs of Kashmīr were probably Punjābi Brāhmans who embraced Sikhism when the valley passed into the hands of Ranjīt Singh, but the Sikhs of Trahal declare that their ancestors came to Kashmīr in the time of Afghān rule. They are not in a flourishing condition. They look to service as their chief means of livelihood, and are not good cultivators. They are ignorant and troublesome, and quarrel with the Musalmān Kashmīrīs and very often among themselves.

In 1901 the State contained 202 native Christians, but, although converts are so few, important work has been done by various missions. Chief among these is the Church Missionary Society at SRĪNAGAR, established in 1865, which maintains an excellent hospital. Owing to its example, the first State dispensary and school were opened. Other missions have been founded by the Moravians and the Roman Catholics at Leh.

The beautiful turf and greensward of Kashmīr are so suggestive

of splendid playgrounds that one naturally expects to find some national game in the valley, and the legendary feast of roses conjures up a vision of a happy laughing people who were skilled in the battle of flowers long before modern Europe dreamed of such carnivals. But in reality there is no game and no pastime in Kashmīr proper. Baltistān, Gilgit, and Astor are the homes of polo, and Ladākh has its devil-dance; but Kashmīr has nothing distinctive save its actors, the Bhānds or Bhagats, already referred to. Sometimes we find in the villages a wandering minstrel (Shair), who sings to the accompaniment of a guitar, or recites verses, often extempore, full of local allusions and usually full of flattery, if an official or person of influence be present. Like most Orientals, the Kashmīris regard amusement as passive rather than active. They are glad to look on at a race or a game, but it is extremely difficult to induce them, athletic and powerful as they are, to take a part in any sport. They are not altogether to blame. In former days pastime was at a discount, and small mercy would have been shown to the serf who suggested that life should not be all labour. Even in the pampered city of Srīnagar the effervescence of youth was checked by Gulāb Singh, who sternly repressed the old ward fights with slings and stones. The professional *shikāris* are often keen sportsmen; and the boatmen of Kashmīr will, when challenged, paddle till they drop rather than be beaten by a rival crew.

Agriculture.

As already explained, the Jammu province consists of a fringe of level land bordering on the Punjab Districts of Jhelum, Siālkot, and Gurdāspur, gradually rising by a succession of ranges of hills to the high uplands bounded by the mountains of the Himālayan range, beyond which lie Kashmīr, Baltistān, and Ladākh. The variations of climate are great, and the staples cultivated naturally vary to some extent with the climate. Thus the lower tracts yield all the usual crops of the Punjab, while in the higher tracts saffron, buckwheat, and mountain barley are grown. In the warmer parts the mango and *shīsham* are found in large quantities; but these give place to apple and pear-trees, to the picturesque *deodār* and shady Oriental plane (*chinār*) in the colder parts.

The province may be roughly divided into three main divisions. The plains and *kandi* hills consist of the *tahsīls* of Kathua, Jasmirgarh, Samba, Ranbīrsinghpura, Jammu, Akhnūr, Manawar, and Mīrpur. In the hot moist tracts, such as those irrigated from the Rāvi and Ujh in the Jasrota district to the south-west, malaria is so rampant that the resident population is too small for the cultivation of the soil, which is chiefly tilled by *udarach* cultivators—men from the low hills who descend to the plain for short periods to sow, tend, and reap crops, and return again to their healthier homes.

North of this lie the thirsty lowlands, sheltered by the hills from the cooler inland breezes, seamed with many channels (*kadhs*), which carry off the drainage of the uplands and become roaring torrents for a few hours after heavy rainfall, but at other times are broad stretches of burning sand. This tract depends for a full harvest on timely and well-distributed rainfall.

The parched *kandi* hills are composed of a red loam, thickly strewn with round stones and covered with stunted growth of *garna sanatan* and *bahaikar* bushes, broad-leaved species of trees, acacias, and in parts bamboos. The *tor* (*Euphorbia*) is used to hedge the fields and cobble-paved paths, and to keep the *nīlgai* from damaging the crops. The soil is thirsty and dries quickly, as the land slopes and drainage is rapid. Frequent rainfall is necessary to ripen the crops, chiefly wheat, barley, and *sarshaf* (rape) in the spring, and millet and maize (on manured land) in the autumn; but rain washes away the soft earth and leaves the surface of the soil a mass of stones.

Where the *kandi* hills end, and before the first limestone ridge is crossed, there is a narrow belt of cool land lying in the valleys traversed by the clear streams which carry the drainage of the middle hills on the lower side. When the depth of soil is sufficient, excellent crops are raised and much of the land is irrigated; but on the slopes where the depth of earth is small, and the limestone crops up to the surface (*prāt*), cultivation is precarious. Too much rain causes the soil to become waterlogged, as percolation is stopped by the rock bed; and during a continued spell of hot weather the rock surface becomes so heated as to burn the roots of the crops, which wither.

In this portion of the province wells are few, owing to their cost. Except in the lowland bordering on the streams deep boring is necessary, and it is common to find that the water is from 70 to 100 feet below the surface. The cultivators are not as a rule sufficiently well-to-do to undertake the expenditure necessary to sink such wells, and risk the failure of finding water. Since the introduction of the regular settlement, the Darbār has done much to encourage the sinking of wells by the grant of advances on easy terms.

In this tract, however, are found the only considerable areas protected by irrigation. The natural difficulties to be overcome are great, as the lie of the land makes projects costly and difficult to execute The lines of irrigation have to cross the drainage of the country, and it is not easy to secure the channels against damage from the *kadhs* when in flood. Owing to this difficulty, the more ambitious projects of former days—the Kashmīr canal taking off from the Rāvi above the Mādhopur weir, the Shāhi Nahr taking off from the left bank of the Chenāb opposite Akhnūr, and the Katobandi or Dalpat Nahr taking off from the Chenāb on the right bank—failed to render

permanent help to the country. Something has recently been done to remedy the apathy displayed in the past. Two old irrigation works taking off from the Tāwi in the Jammu *tahsīl*—the Jogi Darwāza canal irrigating the land immediately below Jammu city, and the Satwari canal irrigating the villages round Satwari cantonment—have been realigned and put in order; and the Dalpat canal, taking off from the right bank of the Chenāb and irrigating a large portion of the Akhnūr *tahsīl* immediately north of the Bhajwath Andar, has been reconstructed.

Under agreement with the Government of the Punjab the right of the State to take water from the Rāvi, above the Mādhopur weir, for the irrigation of spring crops in the Kathua *tahsīl* has been surrendered in consideration of an annual payment of Rs. 5,000. The restoration of the old Kashmīr canal, which takes off above the weir, is thus not financially attractive. Probably the low-lying portion of the Mīrpur *tahsīl*, known as the Khari *ilāka*, could be irrigated from the Jhelum; but this source of irrigation has not been tapped.

There are many drawbacks to agriculture. The administration in the past was bad and shortsighted. There are practically no roads, and in the *kandi* tract even drinking-water is obtained with difficulty. Much damage is done by *nīlgai*, hog, and monkeys, the first-named animal, though an antelope, being regarded as sacred like the cow. Cattle turned loose, either as likely to die and of no further use, or devoted to the deity, have become quite wild and do much damage to crops.

Above the first limestone range lies a country of wide valleys and high hills, consisting of Basoli, Rāmnagar, Udhampur, Naoshera, and part of Riāsi. This has a more temperate climate than the tract just described. The supply of water from perennial streams is constant, but the stream beds are deep and irrigation is not easily effected. Being nearer the Himālayan range, rainfall is usually heavy and fairly regular, so that the people do not trouble themselves much about irrigation, except where this can be contrived at little expense The crops are much the same as in the plains, but *bājra* gives way to maize, and sugar-cane and turmeric disappear. The seasons are shorter. The areas of *prāti* land, where the limestone bed penetrates or approaches the surface of the soil, are considerable. Communications are backward and prices generally rule low. Trade is carried on by Telis, who keep droves of pack-bullocks or ponies. Grazing is good and the tract is frequented by Gūjars, goatherds, and shepherds. A considerable export of *ghī* takes place. Wild hog and monkeys do damage, but no antelope are found. Autumnal fevers are very rare.

The higher uplands, including Bhadrāwar, Kishtwar, Rāmbān, part of Riāsi, and Rāmpur Rājaori, have a really cold climate, and in the

winter snow falls. The cultivators are a different class from those in the plains and lower hills, and Kashmīri settlers are found. Here the mango-tree gives place to the apple; and the pear, the Oriental plane (*chinār*), and the *deodār* are found. The climate approximates to that of the valley of Kashmīr, and cultivation is on much the same lines. The specialities are saffron in Kishtwār, and poppy in Dodār, Kishtwār, and Bhadrāwar. This tract is healthy, and only in the more shut-in valleys do fevers trouble the people. Irrigation is general and the rainfall heavy. Grazing lands are plentiful and Gūjars numerous. Early snowfall and cold winds from the mountains affect the crops in the parts adjoining the Himālayan range, and prevent these coming to maturity in certain years. Bears, hog, and monkeys do some damage.

Owing to its system of rivers, Kashmīr proper possesses a large area of alluvial soil, which may be divided into two classes: the new alluvium, found in the bays and deltas of the mountain rivers; and the old alluvium, lying above the banks of the Jhelum and extending as far as the *karewas*. The first is of great fertility, and every year is renewed and enriched by silt from the mountain streams. Up to the present, in spite of the lax system of forest conservancy, the silt of the mountain streams is rich and of dark colour; but the Sind river brings down an increasing amount of sandy deposit, which is partly due to the reckless felling of trees in its valley.

The Kashmīris, so far, have considered no crop worthy of attention save rice; by irrigation and manuring an artificial mould has been obtained for the rice-fields, and it is rare to hear anything said about the original soil. But they recognize four classes which require peculiar treatment when under rice cultivation. These are known as *grūtū*, *bahil*, *sekil*, and *dazanlad*. *Grūtū* soil contains a large proportion of clay. It holds water, and in years of scanty rainfall is the safest land for rice. But if the rains be heavy, the soil cakes and the out-turn of rice is poor. *Bahil* is a rich loam of great natural strength; and there is always a danger that by over-manuring the soil will be too strong, and the plant will run to blade. *Sekil* is a light loam with a sandy subsoil: and if there be sufficient irrigation and good rains, the out-turn of rice is always large. *Dazanlad* soil is chiefly found in low-lying ground near the swamps, but it sometimes occurs in the higher villages. Special precautions are taken to run off irrigation water when the rice plant shows signs of a too rapid growth; and if these are taken in time, the out-turn in *dazanlad* land is sometimes very heavy. A peculiarity of this soil is that the irrigation water turns red in colour. Near the banks of the Jhelum, and in the vicinity of the Wular Lake, is found a rich, peaty soil (*nambal*), which in years of fair rainfall yields enormous crops of rapeseed and maize. This will not produce rice and requires no manure. It is, however, the custom to

burn standing weeds and the stubble of the last year's crop before ploughing.

The curious plateaux known as *karewas*, which form so striking a feature in the scenery, are for the most part of *grūtū* soil, with varieties distinguished by colour. The most fertile is the dark blackish soil known as *surhzamīn*, the red *grūtū* is the next best, while yellow soil is considered the worst of all. Other classes are recognized, and there are many local names.

The Kashmīris are fortunate in possessing ample manure for their fields, and are not compelled, like the natives of India, to use the greater part of the cattle-dung for fuel. The rule is that all dung, whether of sheep, cattle, or horses, dropped in the winter, when the animals are in the houses, is reserved for agriculture, while the summer dung is dried, and after being mixed with *chinār* leaves and willow twigs is kept for fuel. But the ashes are carefully stored and the fires are chiefly fed with wood, the dung aiding and regulating combustion. The dung-heaps which one sees in early spring show that the Kashmīri wastes nothing that is useful in agriculture; but he has other resources. When the flocks commence to move towards the mountains, the sheep are folded on the fields, and the Kashmīri considers turf clods to be a far more effectual renovator of rice-fields than farmyard manure. These are cut from the sides of watercourses and are rich in silt; and a dressing of clods will strengthen a field for three years, whereas farmyard manure must be applied every year. The strongest farmyard manure is that of poultry, and this is reserved for onions. The next best is the manure of sheep, which is always kept for the rice nurseries. Next comes cattle dung, and last of all horse-dung. The value of night-soil is thoroughly understood. Near Srīnagar and the larger villages the garden cultivation is excellent, and the only manure used is poudrette, or night-soil mixed with the dust of the city alleys and pulverized by the action of the sun.

Agriculture in the valley practically depends on irrigation. Thanks to the formation of the country, this is easy and in ordinary years abundant. If normal snows fall in the winter and the great mountains are well covered, the water-supply for the rice will be sufficient. The snows melt into various mountain streams, which rush down to the Jhelum. From both sides of the river the country rises to the mountains in bold terraces, and the water passes quickly from one village to another in years of good snowfall. At convenient points on the mountain streams temporary weirs or projecting spurs are constructed; and the water is taken off in main channels, which pass into a network of small ducts and eventually empty themselves into the Jhelum, or into the large swamps which lie along its banks. Lower down, where the streams flow gently, dams are erected. All villages which depend for their

irrigation on a certain weir are obliged to assist in its construction and repair. The weir consists of wooden stakes and stones, with grasses and willow branches twisted in between the stakes, the best grass for this purpose being the *fikal*. The channel often has to be taken over ravines and around the edges of the *karewa* cliffs, and irrigation then becomes very difficult. In former days, when the State took a share of the crop, it was to the interest of the Darbār to look after irrigation and to assist in repairs. But since 1880, when an attempt was made to introduce a fixed assessment, the villagers have had to attend to repairs themselves, and where the channel passes through difficult ground the irrigation has become very uncertain. If a ravine has to be crossed, a flat-bottomed boat, similar to those in ordinary use, is erected on high trestles, and the water flows over in a quaint-looking aqueduct. When a *karewa* has to be passed or skirted, a tunnel will sometimes be made; but as a rule the channel is cut along the face of the cliff, and great loss is caused by the frequent breaches. In old days over every main channel there was a *mīrāb*—one of the villagers—whose duty was to see to repairs and to call out labour. The *mīrābs* had not received pay for years, and the channels had fallen into great disorder: but the office has now been revived. The system of distribution is rough and simple; but it has the advantage that quarrels between villages rarely arise, and disputes between cultivators of the same village are unknown. Besides the irrigation derived from the mountain streams, an important auxiliary supply is obtained from numerous springs. Some of these afford excellent irrigation, but they have two drawbacks. Spring water is always cold, and it does not carry with it the fertilizing silt brought down by the mountain streams, but bears a scum which is considered bad for rice. The Jhelum in its long, gentle course through the valley gives no irrigation at present, but as the population increases water will probably be lifted by the Persian wheel. The only lift-irrigation at present takes the form of the simple and inexpensive pot and lever (*dhenklī*), and in Srīnagar and the small towns some splendid garden cultivation depends wholly on this system. On some of the *karewas* the spring-level is not very deep; and when all the land commanded by flow-irrigation has been taken up, it is hoped that wells may be sunk. The bucket and rope will be found more suitable than the Persian wheel, as the spring-level is more than 18 feet in depth. In the north-west of the valley there are a few tanks, and tank-irrigation might be introduced into many parts.

The agricultural implements are few and simple. The plough is of necessity light, as the cattle are small, and is made of various woods, the mulberry, the ash, and the apple being perhaps the most suitable materials. The ploughshare is tipped with iron. For clod-breaking a wooden mallet is used and the work is done in gangs. Sometimes

a log of wood is drawn over the furrows by bullocks, the driver standing on the log. But as a rule, frost, snow, water, and the process known as *khushāba* are considered a sufficient agency for the disintegration of clods. The spade is made of wood, has a narrow face, and is tipped with iron. It is chiefly employed by the cultivator for digging out turf clods and for arranging his fields for irrigation. For maize and cotton, a small hand hoe is used to extract weeds and to loosen the soil. The pestle and mortar for husking rice and pounding maize must also be mentioned. The mortar is made of a hollowed-out bole of wood. The pestle is of light, hard wood, and the best and hardest of woods for the purpose is the hawthorn.

Agricultural operations are carefully timed so as to fall within a certain period before or after the *nauroz*, the spring day of the Musalmāns, and the *mezan*, or commencement of autumn. If the period is exceeded there will be a certain failure in the crop, which is calculated in a most precise manner. The circumstance which interferes with punctuality in ploughing and sowing is the absence of irrigation water at the right time; and in the spring there is great excitement among the villages if water is stopped by some natural cause, such as the late melting of snow, or by other reasons, such as the greediness of some privileged person who defies the local official and takes more than his just share of water. Up to recent times, the cultivator was often seized for forced labour and could not plough or sow at the proper time. And though there is no doubt that rice ought to be sown within forty days after the *nauroz*, sowing often continues up to the middle of June.

In March the rice-fields, which have remained undisturbed since the last crop was cut, are hard and stiff. The soil has perhaps been worked by the frosts and snow; but if, as is sometimes the case, no snow has fallen, it will be difficult work for the plough-bullocks, thin and poor after the long winter, to break up the soil. If rain does not fall, a special watering must be given and ploughing then commences. In certain villages the soil is so damp that ploughing has to be done perforce while the soil is wet, and the out-turn is always poorer than from fields where the soil is ploughed in a dry condition. All the litter of the village and the farmyard manure is carried out to the fields by women and ploughed in, or is heaped in a place through which the irrigation duct passes and so reaches the fields as liquid manure. Sometimes manure is placed in heaps on the fields, and when the field is covered with water it is scattered about by hand. Later on in April, as the weather opens, turf clods are cut from the banks of streams and irrigation channels, and flung broadcast over the wet fields. When four ploughings have been given and the clods have been crumbled with mallets, the soil is watered and sowing can commence in April. The

rice seed, which has been carefully selected at threshing-time and has been stored away in grass bags, is again examined and tested by winnowing. It is then put back into the grass bags and immersed in water until germination commences. Sometimes the seed is placed in earthen vessels through which water is passed. Rice is grown up to an altitude of 7,000 feet; and in the higher villages it is convenient to sow earlier than in the lower villages, as the cold season comes on quicker and it is essential to harvest the crop before snow falls. In certain lower villages also, where it is the custom to sow rice earlier than ordinary, the out-turn is always heavy. The ploughing for maize and the autumn millets is not so careful as for rice, and two or three ploughings are considered ample. A watering is sometimes given to maize-fields to start the seed, but no manure is put in. Cotton alone receives manure in the form of ashes mixed with the seed. All Kashmīris recognize that the greater the number of ploughings the greater will be the out-turn of the crop, but holdings are large and the cattle are small and weak.

In June and July barley and wheat are cut and threshed. The ears are trodden out by cattle or sometimes beaten by sticks, and when there is no wind a blanket is flapped to winnow the grain. Anything is good enough for the spring crops, which are regarded by the Kashmīris as a kind of lottery in which they generally lose their stakes. At the same time comes the real labour of rice weeding, the *khushāba*, a word for which there is no English equivalent. It involves putting the rice plants in their right places, and pressing the soft mud gently around the green seedling. No novice can do the work, as only an expert can detect the counterfeit grasses which pretend to be rice, and *khushāba* must be learnt young. The operation is best performed by hand, but it may be done by the feet (*lat*), or, in a fashion, by cattle splashing up and down the wet fields of mud (*gupan nind*). Sometimes when the rice is two feet high the whole crop is ploughed up (*sele*). When rice has bloomed and the grain has begun to form, the water is run off the fields, and a short time before harvest a final watering is given which swells the ears. Often, while the rice is standing, rapeseed is cast into the water. No ploughing is given, and a crop of rape is thus easily obtained. Before the harvest of the autumn crops commences, about the first half of September, rain may fall and it is very beneficial. It improves the rice crop, and it also enables the cultivator to plough and sow for the spring crops. Such rain is known as *kambar ka*, and there is great rejoicing when these timely showers occur. Before September, if rain has fallen, a large area of land will be ploughed up and sown with rapeseed; and both this and the early sowings for barley and wheat are of importance, as they come at a time when the cultivator and his cattle have some leisure, for then the *khushāba* is over

and harvest has not commenced. There are no carts in the valley, save in the flat plain around the Wular Lake, where a primitive trolly is used; and as the Kashmīris will not use plough-bullocks for carriage, the sheaves of rice and of other crops are slowly and laboriously carried by men to the threshing-floor. When the ricks are thoroughly dry, threshing commences. Seizing a bundle of rice plants in his two hands, the cultivator beats them over a log of wood and detaches the ears from the stalk. The straw is carefully stored, as it is considered the best fodder and the best thatching straw of all.

When the weather is favourable, from October to December, the cultivator is busy ploughing 'dry' land for wheat and barley; but by the end of December ploughing must cease, and the Kashmīris occupy themselves with threshing and husking the rice and other crops and with domestic work, such as the tending of sheep and cattle and the weaving of blankets. It is difficult in mid-winter to tempt a Kashmīri out of his reeking house. The ploughings for wheat and barley are very few and very slovenly. For wheat three at the most, for barley two, are considered sufficient. No labour is spent in weeding or manuring, and the standing crops of wheat and barley would shock a Punjābi farmer. The fields are choked with weeds, and it is wonderful that there should be any crop at all. Two years of barley or wheat would ruin any land, and the Kashmīris have the sense to follow a spring crop by an autumn crop. Some day more attention may be paid to their barley and wheat, but two facts prevent either of these crops being largely produced in the valley. The rainfall is scanty and very uncertain, and if irrigation were attempted the water in the springtime would prove too cold for plant growth.

The principal crops are rice, maize, cotton, saffron, tobacco, hops, millets, amaranth, buckwheat, pulses, and sesamum in the autumn; and wheat, barley, poppy, rape, flax, peas, and beans in the spring.

The most important staple is rice, and the cultivator devotes all his energy to this crop. The soil is porous, and water must be kept running over the fields from sowing time almost to harvest; for if once the land becomes hard and caked, the stalks are pinched and the plant suffers, while the work of *khushāba* is rendered impossible. It is dangerous to leave the fields dry for more than seven days, and the cultivator should always be present to watch the water. The growth of weeds is very rapid; and once they get ahead of the rice, it is extremely difficult to repair the injury caused and to eradicate the grasses, which none but an expert can distinguish from the rice. There are two systems of cultivation. Under the first the rice is sown broadcast; under the second it is first sown in a nursery and then planted out. The broadcast system gives the best out-turn per acre, but the labour entailed is far heavier than that required in the nursery system.

Two ***khushābas*** are sufficient for the latter, while four ***khushābas*** are essential in broadcast sowings. Provided the soil is good and irrigation is fairly abundant, the cultivator will choose the broadcast system, but in certain circumstances he will adopt the nursery method. If water comes late, rice can be kept alive in the nursery plots, and the young seedling need not be planted out till forty days after sowing.

Just as there are two methods of sowing the rice, so there are two methods of preparing the soil. The one is known as *tao*, the other as *kenalu*. An old proverb says that for rice cultivation the land should be absolutely wet or absolutely dry. In *tao* cultivation the soil is ploughed dry; and when the clods are perfectly free from moisture and do not lose weight when placed over the fireplace at night, irrigation is given and the seed is sown. In *kenalu* cultivation the soil is ploughed wet; and when three ploughings are made and the soil is half water and half mud, the out-turn of *kenalu* is sometimes equal to that of *tao*. But as a rule the *tao* system gives the better results and *kenalu* involves the heavier labour.

The rices are infinite in variety. In one *tahsīl* fifty-three varieties have been counted. They may be roughly divided into two classes, the white and the red. As a food the white rice is the more esteemed, and the best of the white rices are *bāsmati* and *kanyun*. These germinate very quickly and ripen more rapidly than any other. But they are very delicate plants and cannot stand exposure to cold winds. They give a small crop and require very careful husking. The white rice, though esteemed as a food, is from a cultivator's point of view less popular than the red rice, which is more hardy, gives a larger out-turn, can be grown at higher elevations, and is less liable to damage from wild animals.

For a good rice harvest the following conditions are necessary: heavy snows on the mountains in the winter to fill the streams in the summer: good rains in March and the beginning of April; clear, bright, warm days and cool nights in May, June, July, and August, with an occasional shower and fine cold weather in September. All Kashmīris assert that *sirdāna*, or full grains, depend on cold dew penetrating the outer husk and swelling and hardening the forming grain.

Next in importance comes maize. The best soil is reclaimed swamp, and enormous crops are raised in good years from the black peaty land which lies under the banks of the Jhelum. In the high villages occupied by the Gūjar graziers very fine crops of maize are grown, and the out-turn is due to the heavy manuring given to the field by buffaloes and cattle. But with this exception maize receives no manure, and the system of harvesting renders it unnecessary. A large part of the stalk is left on the fields, and in the winter the stalks rot

with the snow and rain into the soil. Ordinarily two to three ploughings are given, and a final ploughing covers over the seeds. A month after sowing, when the maize is about a foot high, women weed the fields with a small hand hoe and loosen the soil about the roots. As a rule, maize is grown on 'dry' land, and it is rare to find it irrigated. For a really good crop of maize fortnightly rains are required, but in the swamp-lands the natural moisture of the soil produces fair crops even if the rains are delayed.

Kangni or *shol* (*Setaria italica*) is an extremely useful plant; and when it is apparent from the look of the mountains that snow water will be scarce, a large area of rice land is at once sown with it. The land, if a good crop is hoped for, must be carefully ploughed about four times, and the seed is sown in April and May about the same time as rice. Some weeding is done, but as a rule the crop is left until it ripens in September. *China* or *ping* (*Panicum miliaceum*) is very like rice in appearance, but is grown on 'dry' land. The field is ploughed three times, and after sowing cattle are turned on to the land to tread the soil down. The seed is sown in June, and the crop is harvested in September. It is occasionally weeded; but like *kangni*, with which it is always associated as a cheap food-stuff, *china* does not receive much attention.

The most beautiful of all the crops is the *ganhar*, or amaranth, with its gold, coral, and crimson stalks and flowers. It is frequently sown in rows among the cotton-fields or on the borders of maize plots, and the sulphur blooms of the cotton and the coral of the *ganhar* form a delightful combination of colour. *Ganhar* is sown in May after two or three ploughings. No manure or irrigation is given, and with timely rains a large out-turn is harvested in September The minute grain is first parched, then ground and eaten with milk or water. It is considered a heating food by the people, and Hindus eat it on their fast-days. The stalks are used by washermen, who extract an alkaline substance from the burnt ashes.

Trumba, or buckwheat (*Fagopyrum esculentum*), is a most useful plant, as it can be sown late in almost any soil, and when the cultivator sees no hope of water coming to his rice-fields he will at once sow the sweet *trumba*. There are two varieties. The sweet *trumba*, which has white, pinkish flowers, is often grown as a substitute for rice when water is not forthcoming; it can be sown up to the middle of July, and with good rains it gives a fair crop. The bitter *trumba*, which has yellow flowers, is not a mere makeshift, but in the higher villages often forms the only food-grain of the people. The unhusked grain is black in colour, and is either ground in mills and made into bread or is eaten as porridge. The sweet *trumba* is said to be a good food for horses and for poultry.

Pulses are not considered of much importance by the people, and Punjābis do not regard the Kashmīr *dāl* in a favourable light. Gram is unknown, and the best pulse is *mūng* (*Phaseolus Mungo*). The land is ploughed three times and the seed is sown in May. No irrigation is given, and *mūng* is often sown in rice lands which require a rest. The roots run deep and air the soil. The other pulses are *mah* (*Phaseolus radiatus*) and *mothi* (*P. aconitifolius*).

The oilseeds of Kashmīr are of some importance, and now that Kashmīr is linked with the outer world they are assuming a greater value as a trade staple. The Kashmīris do not use *ghī* (clarified butter) in their food, but they require vegetable oils, and at present they use these for lighting as well as for cooking, owing to the expense of mineral oil.

The chief oilseed is rape, of which there are three varieties. The first is *tilgoglu*, which is sown in September and October on 'dry' lands, and especially on the soft reclaimed swamp land. As a rule there is no weeding, except where the wild hemp is very vigorous. Timely rains from February to May are required, and the crop is harvested in May and June. The second variety is known as *taruz* or *sarshaf*, and is sown in the spring. It ripens at the same time as the *tilgoglu*, but gives a smaller amount of oil from its seed. Three maunds of seed per acre would be an average yield for *tilgoglu*. The other varieties of rape give less. The third kind is known as *sandiji*, and is sown in the standing rice when the last watering is being given. It yields a small crop, but as no labour is expended the cultivator counts even the small crop as gain.

Linseed is cultivated all over the valley, but the best fields are on the lower slopes of the mountains. The land is ploughed twice, and a third ploughing is given when the seed is sown in April. The crop is harvested towards the end of July. Timely rains are required in May or the plant withers. The crop is said to exhaust the land. An average yield would be 1½ to 2 maunds of linseed per acre, but with proper cultivation the produce could be increased. No manure is given and the fields are not weeded, and as a rule the linseed crop has a very dirty and slovenly appearance. As one ascends the slopes of the mountains the plant has a longer stem, and some time ago a fitful attempt was made to grow flax for fibre. Like other excellent schemes for introducing new staples and industries into Kashmīr, the experiment failed as there was no one to supervise or encourage the cultivators.

Til (*Sesamum indicum*), which is a very common crop, is sown in April. The land is ploughed four times, and a fifth ploughing is given at sowing. No manure is applied, but *til* requires a rich soil and gentle and timely rains. The crop is weeded with the hand hoe, and is more carefully looked after than any of the other oilseed plants.

The plant is very delicate and is injured by cold winds. The crop ripens shortly after rice, and blankets are spread under the plants at harvest-time to catch the seeds, which fall out of the pods with the slightest movement. In Kashmīr the oil, which is sweet, is valued as an ointment. An average yield would be about 1½ maunds of seed per acre.

This will be a convenient place to give a brief description of oil production. Formerly oil was taken by the State in payment of revenue; but this practice has now ceased, and the cultivator either sells his oilseeds to Punjābi traders or expresses oil for his own consumption or for sale. There are Telis or professional oil-pressers all over the valley, and they charge for their services a small amount of oil and keep the whole of the oil-cake, which they sell to the villagers for cattle-food. The press is made of plane-wood, and is worked by a single bullock, blindfolded, the driver sitting perched up at a great height on the beam which crushes the seed and is carried backwards. The press is fed with seed by a man who stands below. The Kashmīris say that rapeseed gives the best oil for lighting purposes, and linseed for eating; but as a matter of fact one never gets a pure oil from the press, as the various seeds are mixed by the oil-presser, and kernels of the walnut and apricot are added. The natives give as a reason for mixing the various seeds, that a much larger amount of oil is obtained by crushing together various sizes and kinds of seed than could be obtained from crushing each separately. The walnut is an important oil-producer, but this and the apricot are not considered to give good oils for lighting. Walnut oil is said to clog, and does not give half the burning power of other oil.

Cotton is grown all over Kashmīr up to a certain elevation; and, as a rule, where the white rices cease to be cultivated owing to the coldness of the air, there too the cotton plant disappears. It is cultivated on the *karewas*, and also in low-lying land which is irrigable but requires a rest from rice. The soil should be ploughed frequently, and never less than three ploughings are given, after which the clods are well pulverized by mallets. The seed is soaked in water and mixed with ashes before sowing, but the plant receives no manure. Sowing takes place at the end of April and in May, and the fields are often watered at sowing time.

Wheat and barley are the two spring crops of the valley, and of these the barley crop is the more important, if area alone be considered. The barley commonly grown in the valley is not of a good quality, and no pains are taken in its cultivation. One ploughing is given, and when the seed is sown from October to December the land is again ploughed. The fields are neither weeded nor manured, and probably have not their match in the world for bad and slovenly cultivation. It is sometimes

difficult to distinguish the barley in the mass of *chirman* weed (*Ranunculus sp.*). The grain is not esteemed as a food, but is very often mixed by millers with wheat. In the higher villages, at an elevation of 7,000 feet, there is a peculiar kind of barley known as *grim*, or Tibetan barley, which is an important food-staple among the mountain people. The villagers always speak of it as 'bastard wheat.' The grain has not the chaff scales adhering to it, but is naked like wheat. The people say that, if this is grown at a lower altitude, it reverts to the type of ordinary barley. It is sown in May and June, and ripens in August and September.

Wheat receives better treatment than barley, but two ploughings, with a third at seed-time, are considered sufficient. The land is neither manured nor weeded, and as a rule no irrigation is given. Seed is sown in September and October, and the crop ripens in June. The common variety is a red wheat with a small hard grain, and Punjābis consider the flour to be very inferior. Just as the grain of barley, and to a certain extent the grain of wheat, are looked down upon as a food by the rice-eating Kashmīri, so too the valuable straw of these cereals is neglected as a cattle-food, and it is common to see large ricks of wheat-straw left to rot on the land. On the other hand, rice-straw, which is not used for fodder until all else fails in Northern India, is the most popular fodder in Kashmīr. It may be that the high elevation renders the rice-straw less flinty and more succulent here than in India.

The saffron (*Crocus sativus*) of Kashmīr is famous for its bouquet, and is in great request as a condiment and as a pigment for the sect-marks of Hindus. Various substitutes, such as turmeric, are now used for the latter purpose by Kashmīri Pandits; but if a man can afford it he will use the bright saffron colour, mixed with red lead and pounded with a piece of *deodār*-wood. The cultivation is peculiar, and the legend about its introduction shows at any rate that it is an ancient industry.

At present cultivation is extending as fast as the local method of seed-production will allow. But that this method is slow may be inferred from the fact that, at measurement of a total area of 4,527 acres of saffron land, only 132 acres were actually cultivated with the crocus. In former days[1] the saffron cultivation was a large source of revenue to the State; but in the famine the people in their distress ate up the bulbs, and although seed has been imported from Kishtwār, and every year land is set apart for the production of seed, the process of reproduction is slow. For seed purposes a particular aspect and sloping ground is required, and it takes three years before the bulbs can be

[1] 'There are 10,000 or 20,000 *bīghas* of land covered with saffron, which afford a prospect that would enchant those who are most difficult to please.'—*Āīn-i-Akbarī*.

planted out in the small square plots where the saffron is to be grown. These plots must remain fallow for eight years, and no manure can be applied to them and no assistance given in the way of water. When once the bulb has been placed in the square it will live for fourteen years without any help from the cultivator, new bulbs being produced and the old ones rotting away. The time for planting out is in July and August; and all that the cultivator has to do is to break up the surface gently a few times, and to ensure the proper drainage of the plot by digging a neat trench on all four sides. The flowers appear about the middle of October; and the purple blooms and the delicious though somewhat overpowering scent of the saffron turn the dry, uninviting plateau above Pāmpur into a rare and wonderful garden. Saffron is at present limited to the *karewas* in the neighbourhood of Pāmpur, but there is no peculiar property in the soil there which does not exist in other *karewas*, though it is of exceptionally good quality.

In former days men came from all parts to cultivate saffron on the Pāmpur *kārewas*; but now, with the exception of a few people from Srīnagar, the industry is in the hands of local cultivators. At harvest-time the whole flower is picked and put into bags and then taken to the farmer, who takes one bag for himself and gives the other bag to the cultivator. The bags are never opened, and it has been found by experience that the cultivator never attempts to foist a bad bag on the farmer. When the flowers have been collected the real work of extracting saffron commences. The flowers are dried in the sun, and the three long stigmas are picked out by hand. The stigma has an orange-red tip, and this tip forms the *shāhi zafarān*, the first quality saffron. The long white base of the stigma also makes saffron, but it is of inferior quality to the tips. The article thus collected in a dry condition is known to the trade as *mongla*, and sells for one rupee per *tola*. When the *mongla* saffron has been extracted, the sun-dried flowers are beaten lightly with sticks and winnowed. Then the whole mass is thrown into water, when the petals swim and the essential parts of the flower sink. The parts which have sunk (*niwal*) are collected, and those which have risen to the top are dried and again beaten with sticks and then plunged into water. The process is repeated three times, and each time the *niwal* becomes poorer. One form of adulteration is to mix *niwal* of the third with *niwal* of the first process. The saffron obtained in this way is lighter in colour and of fainter scent than the *monglā*, and is known to the trade as *lacha*, and sells at 12 annas per *tola*. The saffron when made is exported by post.

Next to the saffron cultivation in interest come the floating gardens of the Dal Lake, which resemble the 'chinampas' of Old Mexico. The whole cultivation and vegetation of the lake is full of interest and of great importance to the people. The *rādh* or floating gardens are

made of long strips of the lake reed, with a breadth of about six feet. These strips can be towed from place to place, and are moored at the four corners by poles driven into the lake bed. When the *rādh* is sufficiently strong to bear the weight of a man, heaps of weed and mud are extracted from the lake by poles, formed into cones, and placed at intervals on the *rādh*. The cones are known as *pokar*, and each cone accommodates two seedlings of melons or tomatoes, or four seedlings of water-melons or cucumber. Everything that plant life requires is present. A rich soil and ample moisture, with the summer sun, help to produce vegetables in surprising abundance and of excellent quality. Not inferior to the floating gardens in fertility are the *demb* lands, which are formed along the sides and sometimes in the middle of the lake when the water is shallow. The cultivator selects his site, and plants willows and sometimes poplars along its four sides. Inside these he casts boatloads of weed and mud until his land is above the flood-level, and year by year he adds a new dressing of the rich lake weed and mud. Around the *demb* plot run little water-channels from the lake, so that moisture is always present; and on the *demb* a great variety of crops are raised. Rapeseed, maize, tobacco, melons and other *Cucurbitaceae*, potatoes, onions, radishes, turnips, egg-plants, white beans, peaches, apricots, and quinces flourish on this rich soil; and if it were not for the constant liability to forced labour, and for the curious system under which revenue is collected daily from the half-amphibious dwellers on the Dal Lake, the cultivators of the *demb* lands might be the most prosperous people in Asia. The system is of importance, as it is not confined to the Dal Lake; all over Kashmīr the people who live by the great swamps have begun to construct these curious oblong patches.

Tobacco is cultivated in many parts, but is chiefly grown in and around Srīnagar and the smaller towns. The ordinary cultivator does not grow the plant, and it is almost entirely in the hands of the gardener class which exists in the city and the towns. The plant yielding the most esteemed tobacco grows in one part of Srīnagar, and is known as *brewari* (*Nicotiana Tabacum*). It has pinkish flowers, and its product, which is of a bright yellow colour, is extremely mild and less pungent than the *chilāsi* variety, introduced from the Punjab. The *chilāsi* is *N. rustica*, a plant with pale yellow flowers. Tobacco is sown in April, and is picked about the end of August. It requires very rich soil, and is irrigated by the pot and lever system. Formerly the State took tobacco as revenue and allowed a high commutation rate for the crop; but of late years tobacco has not been accepted in payment of revenue, and it is thought that the cultivation is not increasing. The local use of tobacco passed out of fashion at the great famine, and the narcotic is now chiefly taken in the form of snuff, which is imported from Peshāwar.

In the same rich land, black with poudrette, which the gardener class of the city and towns cultivate so carefully and well, the opium poppy is raised, and its dried capsules are used in medicine. *Ajwain* and *kālā zīra* (*Carum sp.*) are two garden spring crops, cultivated for local use as condiments for improving the condition of horses and cattle. They are largely exported to India, Ladākh, and Afghānistān. Vegetables are of great importance, and every villager has his small garden plot, where he raises a wealth of food with very small effort. In the neighbourhood of Srīnagar some care is taken in the selection of seed, and the villager often buys his seed from the city; but in the remote corners of the valley very little attention is paid to this class of cultivation, and the vegetables are poor, fibrous, and small.

The national vegetable is the knol-kohl. It is a hardy plant, and in years of favourable rains large crops are raised without much labour. The green variety is the commonest; in the summer the leaves are eaten as spinach, while the root is kept for the winter. Next in importance is the turnip, which is largely cultivated. The root is cut into slices and dried for the winter. Vegetable marrows abound, and they too are dried in the sun and festooned on ropes for winter use. They are grown in raised cones of earth, through which the air passes easily to the roots. Tomatoes are a popular vegetable, but the plant is allowed to lie on the ground, and the fruit is small and ugly. It is cut into rings and dried in the sun for winter use. Chillies are chiefly grown by the regular gardening cultivators, and very large crops are raised in the neighbourhood of the city and the towns. Cucumbers of a large size are grown in abundance on the Dal Lake, but they are not common elsewhere. The egg-plant is well-known in the valley; and last, but not least, the potato is gradually extending. On the hill slopes of the Trahal *ilāka*, in Naubug, and in one or two other places, excellent potatoes are raised; and now that the old fear that anything good would either be seized or would lead to an enhancement of revenue is passing away, they will be a common crop throughout the valley. The soil of the valley is well drained, friable, and loamy, and every condition requisite to successful potato cultivation is present. Nature is so bountiful that the Kashmīri cares little for vegetables in the spring or the summer, and his one idea is to grow something that will last him through the winter.

Various herbs are eaten as vegetables in the spring and summer: thistles, nettles, the wild chicory, the dandelion—in fact, every plant which is not poisonous goes into the cooking-pot, and even the stalk of the walnut catkin is not despised. In the hills a dainty dish of the wild asparagus can be easily obtained, and wild rhubarb cooked in honey has its charms.

Kashmīr is a country of fruits, and perhaps no country has greater

facilities for horticulture, as the indigenous apple, pear, vine, mulberry, walnut, hazel, cherry, peach, apricot, raspberry, gooseberry, currant, and strawberry can be obtained without difficulty in most parts of the valley. The fruits are a great help to the people as a food, and they come in a pleasant and changing succession. When the first days of summer arrive, the mulberry-trees are surrounded by villagers with their outspread blankets, and by cattle, ponies, and dogs, who all munch the sweet black or white fruit. There are grafted varieties, the best of which is *shahtūt*, purple and juicy, and much esteemed as a preserve. With an eye to the winter the provident cultivator stores away the mulberries which he cannot eat, and they retain their sweetness long. The apricot ripens next, and they too are quickly eaten or stored away for the winter; but the Kashmīri looks on the apricot as intended to give oil rather than fruit. This fruit is also used by the silversmith for cleaning his metal, and by dyers as an astringent. The cherry is usually of the black morella variety, sour in taste, yet appreciated by the people; but in places the delicious whiteheart (an introduction from Europe via Arabia, Persia, and Afghānistān) is cultivated. Its Kashmīri name, *gilas*, is a corruption of *Cerasus*. People say that it is indigenous, and it is found in places where one might almost imagine it was self-grown. The wild plums are excellent, and the cultivated plums are often very fine. The peach that has extended its area from cultivation is small but refreshing, and a wild raspberry is as good and as delicate in flavour as the cultivated raspberry of England. The gooseberry is small and flavourless, but the wild strawberry and black currant are excellent.

The most popular apple is the *anbru* or *amri*, which has a large round red and white sweet fruit, ripening in October and keeping its condition for a long time. This is exported in large quantities, and it finds favour with the natives of India for its sweetness and handsome appearance. To an English taste it would seem woolly and flavourless. The *mohi amri* is like the *amri*, but is more acid and redder. It is largely exported. The *khuddu sari* apple is said to have been introduced from Kābul. It is long in shape, and is juicy and rather acid, ripening early and not keeping. But the best apple, so far as flavour goes, is the little *trel*, which abounds in the neighbourhood of Sopur. There are three common kinds: the *nabadi trel*, which is yellow, the *jambāsi trel*, which turns red; and the *sil trel*, which is rather larger than the *nabadi* and *jambāsi*, and of a deep red colour. When ripe these little apples have the most delicious taste, half sour, half sweet, and when they rot they are exactly like the medlar in flavour. From this variety, when picked at the right time, excellent cider has been made. A superior variety of the *trel* is the *khatoni trel*, which is larger but possesses all the flavour of the smaller kind. There are many other kinds, but the Kashmīri would give the palm to the *dud amri*, which

is the sweetest and finest of the *amri*. Many of the wild apples, such as the *tet shakr* and *malmu*, are very refreshing, and it is a curious fact that the greater part of the orchards consist entirely of wild trees. About the beginning of September the people pick the wild apples and the *trel* apples, and having cut them in half dry them in the sun.

The pear is as yet of secondary importance, and does not form a large article of export. But several very good pears are cultivated, the best of which are the *nāk satarwati*, which has a beautiful shape and a sweet juicy flesh, and the *nāk gulābi*, which has a pretty red skin and is a very pleasant fruit. The Kashmīris, though they think it essential to peel an apple, never peel pears. They also hold that it is dangerous to eat pears in the winter. Cold in the head and the eyes is the result of such indulgence. The early pear is known as the *gosh bug* and is very refreshing, and the later fruit is called *tang*. None of these will keep for long, and late pears are required. From the State nurseries a splendid French pear has been sent out all over the valley, but unless these are most carefully packed and quickly transported they cannot reach India. The wild pear is found all over the valley, and it often resembles the perry pear of Herefordshire.

The quinces, sour and sweet, are famous, and in the gardens of the Dal Lake splendid specimens of this fruit are to be seen. The tree is grown for its seed, which is exported to the Punjab. Pomegranates are common, but are not of any especial merit.

In old days Kashmīr was celebrated for its grapes; but now, if a few vineyards at the mouth of the Sind valley be excluded, it is difficult to obtain a good dessert grape in the country. Everywhere one sees giant vines climbing up poplars and other trees, but they are often wild, and their fruit is poor and tasteless. The people say that they cut down their good vines in order to avoid the exactions of officials. The grapes, white and red, from the State vineyard at Raipur in the Sind valley are delicious, and efforts are being made to reproduce the Raipur vines in other parts of the valley. With the decline of the eating grape there has been an attempt to introduce the wine grape, and at present there are 389 acres of vineyards on the shore of the Dal Lake. The vines were introduced from Bordeaux in Mahārājā Ranbīr Singh's time, and no expense was spared to make the scheme a success. Perhaps the vines of Burgundy would have been more suitable. Costly distillery plant was imported and set up at Gupkar on the Dal Lake, and wines of the Médoc and Barsac varieties, as well as brandy, have been manufactured year by year. The only market at present is Srīnagar, as the long road carriage and the duties levied at the frontier make it difficult to deliver wine in India at a moderate price. In 1900–1 the gross receipts were Rs. 33,000, and the net profit had averaged about Rs. 11,000 during the preceding four years.

Hops were also introduced by Mahārājā Ranbīr Singh, and the hop garden at Dubgam below Sopur yields a handsome return to the State. In 1900-1 the total produce was 25,000 lb. The crop is sold at from 12 annas to a rupee per pound, and fetched Rs. 21,000, while the expenses were only Rs. 5,600.

The walnut-tree is indigenous to the country, and is known by the vernacular name *vont dun* ('hard walnut'), as under ordinary circumstances one is unable to break the shell. The fruit is useless, but the bark used to be a large export to the Punjab. The fruit of the cultivated tree is an important aid to the villagers, though they seem to be somewhat indifferent to its reproduction. The tree is found all over the valley, from an elevation of about 5,500 feet to 7,500 feet. It is propagated from seed; and although grafting is not uncommon, the general idea seems to be that the three varieties—the *kāghazi*, the *burzal*, and the *wantu*—reproduce themselves from seed. Hitherto walnuts have been grown for oil and not for eating, and the *wantu*, in spite of its thick hard shell, is the largest fruiter and gives the most oil. The *burzal* stands half-way between the *kāghazi* and the *wantu*, and is like the ordinary walnut of England. Some of the trees reach an enormous size, and the finest specimens are to be found as one ascends the mountain valleys. In former times the State accepted walnut oil in payment of revenue, and it was more profitable to the villager to give oil as revenue than to sell the nuts to Punjābi traders. Now no oil is taken as revenue, and the export of walnuts is rapidly increasing. The Kashmīris do not care for the nut as a food, as it is heating, but it always forms part of the New Year's presents among Hindus and Musalmāns. Not long ago the walnuts were exposed to a very serious danger. In Paris there was a demand for the huge warts which grow on the walnut stem, the wood of which is used by cabinet-makers for veneer work, and a Frenchman obtained from the State the right to saw off these warts. Countless trees were destroyed, for life went with the wart. Another danger to which walnuts, like other fruit trees, are liable is the occurrence of the *kut kushu*, an icy mist which settles over the valley in severe winters, and freezes out the life of the trees.

Large almond orchards are scattered over the valley, and many of the hill-sides might easily be planted with this hardy and profitable tree. It is a somewhat uncertain crop, but very little attention is paid to its cultivation, and as a rule the almond orchards are unfenced. There are two kinds, the sweet and the bitter; the former is worth double the latter in the market. Ruined almond gardens in all parts of the valley attest the fact that State enterprise cannot succeed in horticulture.

There are several varieties of the *singhāra* (*Trapa bispinosa*), but all

seem to have white flowers floating on the surface of the water on stems supported by air vessels. When the fruit ripens, the nuts sink to the bottom of the lake. The *singhāra* is found on the Dal Lake and in other localities, but its home is the Wular Lake. Of the chief varieties the best is called *bāsmati*, in honour of the rice of that name. This is a small nut with a thin skin, and gives one-third of kernel for two-thirds of shell. The *dogru* is a larger nut with a thicker shell; and the *kangar* has a very thick shell with long projecting horns, and gives the least kernel of all. Attempts have been made to propagate the *bāsmati*, but it is found that after one year the inferior varieties assert themselves.

The cattle of Kashmīr are small but hardy, rather bigger than Brittany cattle. They have humps, and their prevailing colour is black or grey. Very little attention is paid to selection in breeding, but a strain of Punjab blood has entered the valley, and the dairymen favour cows of this type. The improvement of the local breeds has been recently considered by a committee. As summer approaches, all cattle, save the requisite plough-bullocks and the cows in milk, are driven off to the mountain pastures, returning in the autumn to the villages. Great pains are taken to store fodder for the winter, and there are many excellent grasses and fodder trees. The Gūjars, who live on the fringe of the forests, keep a large number of buffaloes and produce a considerable quantity of *ghī*.

Sheep are largely kept. They supply warmth, clothing, and manure, and are of great importance to the villagers. As the days grow warmer, the sheep move up to the grand pastures above the forests, and return in the autumn. The sheep are made over to professional shepherds when they go to the mountains. In the winter they are penned beneath the dwelling-rooms of the villagers, and much of the Kashmīri's comfort in the cold months depends on the heat given out by the sheep. The wool is excellent, but it varies in quality. Roughly speaking, the finest wool is found in the north of the valley where the grasses are good. For winter fodder the Kashmīri depends on willow leaves and the sweet dried leaves of the flag (*Iris*). Salt is always given to the sheep.

Goats are not numerous in the valley, but every year enormous flocks are brought up to the mountains. They do much injury to the forests.

The ponies are small, but wiry and of great endurance. Every village has its brood mares, but no care is taken in the selection of sires. There is a great future for rational breeding, and also for mule-breeding.

Poultry is abundant. The best breed of fowls is found in the Lolāb valley. Geese and ducks are common, and there is a large export of

the latter to the Punjab. Turkeys have not yet succeeded in Kashmīr.

Honey is produced in the higher villages of the valley. One house will often contain many hives, and in a good year a hive will give 8 seers of comb. The hive consists of two large concave clay plates let into the wall of the house, and in the outer plate there is a small hole through which the bees enter. The honey is clear and excellent.

It is believed that the silk industry of Kashmīr is of very ancient date, and that the valley furnished part of the Bactrian silk which found its way to Damascus. In 1869 Mahārājā Ranbīr Singh, who was an enthusiast in new industries, organized sericulture on a very large and expensive scale. But the industry was unpopular, as it was conducted on purely official lines in which coercion played a great part. There was no real skilled supervision; disease attacked the silkworms, and the enterprise languished. But in spite of mistakes and failure, it was proved that Kashmīr could produce a silk of high quality. In the Kothar valley to the south the industry lingered on, and the Settlement officer, Mr. (now Sir) Walter Lawrence, fostered it, but avoided any large outlay. Excellent silk was produced in 1894, and was placed on the English market with satisfactory results. Later, in 1897, an expert was employed, and the State started sericulture on approved European principles with Italian reeling machinery. All attempts to raise local seed were abandoned, and seed was imported annually on a large scale. The results have been surprising. The industry is no longer confined to Kothar, but has spread all over the valley, and its further progress depends on the maintenance and extension of mulberry-trees.

Ten filatures have been built, containing 1,800 basins for reeling cocoons, fitted with Italian machinery and giving employment to over 5,000 people in Srīnagar. The quality of the silk steadily improves, and it now commands a price very slightly below Italian silk. In 1897 only 406 ounces of eggs were imported, while in 1906 the import was 27,500 ounces. The number of *zamīndārs* taking seed has risen in the same period from 150 to 14,000, and the weight of cocoons reared from 375 to 21,400 maunds, while the payments to the rearers increased from Rs. 4,300 to Rs. 3,28,500, all the eggs and mulberry leaf being given free of cost. The total production in 1905–6 was 109,072 lb. of raw silk, and 43,349 lb. of silk waste. The profits since 1897, when the industry was started on a scientific basis, have been 15·4 lakhs, of which 4·6 lakhs was made in 1905–6. The total capital outlay has been Rs. 7,25,000, while the working expenses are about 7 lakhs a year.

The forests of the State are extensive and valuable, and their conservation is of great importance in the interests of the country

drained and irrigated by the rivers passing through them. Including the Bhadarwāh *jāgīr*, which contains the finest quality of timber, the area is reported as 2,637 square miles of all kinds, comprising *deodār*, firs, pines, and broad-leaved species. This may be divided into the drainage areas of the Jhelum (1,718 square miles), Chenāb (806), and Rāvi (113). The *deodār*, which is the most valuable species, extends between 5,000 and 9,000 feet above sea-level, and is at its best between 6,000 and 9,000 feet. The blue pine appears at about 6,000 feet, and extends to nearly 10,000 feet, the finest specimens being found mixed with *deodār*. A zone between 8,000 to 11,000 feet is occupied by silver fir, which occurs pure in dense forests at the lower elevation and is mixed at greater heights, first with maple and then with birch. Tree vegetation above 11,000 feet consists of dwarf rhododendron and juniper.

Forests.

The total area under *deodār* is about 543 square miles. In the Kashmīr Valley it is found principally, indeed almost entirely, in the north-west—that is, the district known as Kāmrāj—and the largest areas are in the Utr Machipur *tahsīl*. In Udhampur district, which includes the Kishtwār and Padar *tahsīls*, there are 198 square miles of *deodār*-bearing tracts situated on the Chenāb and its affluents. These forests are of a very good class, containing many fine trees of 12 to 18 feet girth, and the reproduction is mostly good. In the Muzaffarābād district, which contains the valley of the Kishangangā river and that of the Jhelum from Kohāla nearly up to Bāramūla, there are estimated to be 158 square miles of *deodār* forest. Rāmnagar, formerly the *jāgīr* of the late Sir Rājā Rām Singh, K.C.B., contains a very small proportion of *deodār* forest, and it has been generally overworked. Finally, the Jasrota district, situated on the right bank of the Rāvi river, contains a small area of *deodār* in the Basoli *tahsīl*. These forests also were formerly held in *jāgīr* and were practically denuded of all mature trees, so that no fellings can take place for many years to come.

Pines and firs occupy about 1,100 square miles, and *chīl* (*Pinus longifolia*) 473 square miles. The last is found in lower altitudes below the blue pine and *deodār*, existing in practically pure forests in Muzaffarābād, Bhimbar, Rāmnagar, Udhampur, Jammu, and Jasrota. The Kashmīr Valley, having a lowest elevation of 5,200 feet above sea-level, contains no *chīl*. The Bhimbar Forest division (and district) has the greatest area under *chīl* (220 square miles), situated principally in the Kotli and Naoshera *tahsīls*. Some of these forests are of very fine quality, and will in time give a large number of mature trees for sale, but at present they are not being worked. Next to this comes the Rāmnagar division, which includes part of the Jammu district; but these forests are badly stocked and have been overfelled, and will take many years before they can be of much value as a commercial asset.

The Chenāb division, which also comprises part of the Jammu district, has some forest of poor quality. In Udhampur most of the forest is too far from a market to be profitable. When good cart-roads or light railways have been made, it may be possible to utilize the Bhimbar and Jammu *chīl* forests for the distillation of turpentine, but at present the cost of carriage is prohibitive.

Next come the fir forests. Owing to their altitude, it would naturally cost more to extract their timber; and the selling price of fir being very low, these forests are unworkable except in the Kashmīr Valley, where the timber is used as firewood mainly for the silk factory at Srīnagar. Perhaps in the future, when artificial preservation of the timber in the form of sleepers, &c., by creosoting, has been resorted to, these forests will prove of great value.

Lastly, there are the forests of broad-leaved species, and these are at present only of value in the Kashmīr Valley for the supply of firewood to the city of Srīnagar. Bamboos are found mainly in the Jasrota district on the Rāvi river, where there are about 3,200 acres of mixed forest which contain the so-called male kind (*Dendrocalamus strictus*). They are saleable at a good price, but are at present subject to much injury from the Gūjar tribes, who hack them for fodder for their cattle. The grass areas are mostly blanks inside *deodār* and other forests, which are used as grazing-grounds by the villagers.

In the Kashmīr Valley the forests supply timber and firewood for local use and also logs for export. During the past few years *deodār* sleepers have been exported down the Jhelum river, the sleepers paying very well, though the quality is not so good as in other districts. Little *deodār* is used in Srīnagar in comparison with blue pine, which, being both very durable and cheaper than *deodār*, is the favourite building material. From Udhampur both logs and sleepers of *deodār* are exported down the Chenāb to Wazīrābād. The trees being of better quality, higher prices are obtained for the produce than for that of Kashmīr. From Muzaffarābād timber in the log and sawn into sleepers is exported down the Jhelum. The sleepers are entirely of *deodār*, but logs of both blue and long-leaved pine are also sent down in small quantities. These three districts, Kāmrāj, Udhampur, and Muzaffarābād, give the greater part of the forest revenue, which in 1904-5 amounted to 9·8 lakhs, while the expenditure was 3 lakhs.

Up to the present, owing to the weakness of the forest establishment, little has been done in the matter of artificial reproduction of *deodār*, nor is it necessary. Owing to the protective measures already taken, the three important species—*deodār*, blue pine, and the long-leaved pine—are rapidly filling up blanks in the forests. The reproduction of *deodār* by natural means, whether in Kashmīr, Udhampur, or any other district, is remarkable, nor is the blue pine at all backward, while in the

Kotli and Naoshera *tahsils* of Bhimbar district the restocking of blanks inside and outside the forests is all that can be desired. Since the last great seed year of 1897 myriads of self-sown *chīl* have appeared and are now fine healthy plants, ranging from 6 to 9 inches in height, so that unless destructive fires occur there is little or nothing to be done in the matter of restocking denuded areas or blanks. So far fire protection has been unnecessary and hardly anything has been expended on it, and the only parts protected are the Kotli *tahsīl* forests. The greatest need at present is protection from the damage done by graziers.

About three-quarters of the State forests have been demarcated; but before really scientific forestry can be introduced, it will be necessary that a regular survey should be made and a settlement of the forests effected, and the great task of drawing up working-plans for future guidance must be undertaken.

Before 1891 there was no proper management of the forests, and much damage was done by allowing traders to cut in the forests on payment of royalty without any supervision, while villagers also did immense injury to the forests in various ways, the State gaining little or no revenue. In 1891 the first attempts were made to put matters on a proper basis, with the result that, while most forms of forest injury except grazing have ceased, the profits have increased largely. Thus the net revenue in 1904–5 was 6 lakhs, while before 1891 it hardly exceeded 2 lakhs. The Forest department is under the control of a European Conservator, assisted by a staff of subordinates.

Mines and minerals.

Some authorities have held that there is not much hope of mineral wealth in the State; and among the reasons given is the fact that, as a rule, where valuable minerals exist, the natives of the country know of their existence. The Kashmīris, however, have excellent reasons for reticence on the subject of minerals; and the find of valuable sapphires in Padar in 1882 and the more recent discovery of coal at Ladda and Anji in the Udhampur district of Jammu territory, give hopes for the future. Vast fields have been found, in two sections of which it is estimated that there are 1 million tons of workable coal. The coal is extremely friable, dirty, and dusty. Some of it cokes strongly if subjected to great heat. It is held by competent authorities that the washed and briquetted coal of these fields will have a value equal to, if not greater than, Bengal coal. Exploration for minerals has not yet been attempted on sound or business-like lines. Excellent iron has been obtained at Sof in the south of Kashmīr; good limestone is available in large quantities; gypsum is abundant; and a recent discovery of gold has been made at Gulmarg, the chief summer resort of European visitors to Kashmīr.

Arts and manufactures.

The industries connected with sericulture, oil-pressing, and the manufacture of wine and brandy have already been mentioned, but the State is still more celebrated for its arts. The most important of these is described in the article on SRĪNAGAR, but other places also possess considerable reputation for various classes. Wood-carving is practised at many places, and that turned out at Bijbihāra is especially noted. The work is artistic, but suffers from the fact that the Kashmīri is a bad carpenter. Lacquered wood-work is produced at Kulgām. Woollen cloth (*pattū*) is woven all over the State, the best work being produced in the north, while the finished product of the south is especially famous. Blankets are made in many places, and sometimes fetch Rs. 25 a piece. The blacksmiths are very skilful, and some have been able to make surgical instruments and repair gun-locks. The city of Srīnagar is noted for its silver, copper, wood-carving, and lacquer. The shawl and paper industries are almost extinct, but many of the shawl-workers have become expert weavers of carpets or have taken to embroidering felts. Good embroidery is also turned out at Islāmābād. An industry started very recently, in connexion with the development of sericulture, is the weaving of silk cloth. In 1906 about 100 looms of improved pattern were imported and set up.

Commerce and trade.

Up to quite recent times Kashmīr was almost a self-supporting country, and the chief imports -piece-goods, metals, salt, sugar, tea, and tobacco—were of modest dimensions. Before the opening of the cart-road from Rāwalpindi to Bāramūla in 1890, the trade was carried by Kashmīris who went down every winter to work in the Punjab, and brought back domestic requisites, or by the professional muleteers, or by Punjābi bullock-drivers. There were three trade routes. The most direct crossed the Banihāl pass and ran to Jammu, the railway terminus; the most popular route followed the old imperial road over the Pīr Panjāl, reaching the railway at Gujrāt; and the third was known as the Jhelum valley road, which is now the cart-road and the main line of communication with the Punjab.

In 1892–3 the total imports from India were valued at 48·7 lakhs. In 1902–3 the imports reached 118 lakhs, but the trade of that and later years was greatly impaired by the prevalence of plague in the Punjab. In 1904–5 the total value was 115 lakhs. The table on the next page shows the value of the more important imports in the years chosen for comparison.

There can be little doubt that Kashmīr has increased enormously in prosperity of late years. The land revenue settlement has turned the agricultural classes from serfs into well-to-do peasants, and their wealth is reflected in their increased purchases. The increase in the

import of salt is especially satisfactory, as in 1892 it was shown that the annual average of consumption in Kashmīr was exactly half of that prevailing in the Punjab.

	1892-3.	1902-3.	1904-5.
	Rs.	Rs.	Rs.
Piece-goods :—			
European	76,688	34,72,934	35,92,556
Indian	21,572	9,60,185	7,86,485
Metals :—			
Brass and copper	1,33,143	1,42,410	99,888
Iron	1,31,270	4,92,020	1,19,567
Salt	4,83,293	8,69,761	9,32,601
Sugar :—			
Refined	4,82,584	9,21,872	8,28,675
Unrefined	1,15,433	2,47,686	3,43,761
Tea :—			
Indian	1,73,730	3,57,648	5,22,871
Foreign	2,030	1,360	3,615
Tobacco	1,01,253	2,32,302	3,91,960
Petroleum	56,112	81 795	1,84,164

In 1892–3 the total exports were valued at 53·3 lakhs. In 1902–3 the value reached 99·6 lakhs, and in 1904–5, 192 lakhs.

The following table shows the value of the more important exports in the years selected :—

	1892-3.	1902-3.	1904-5.
	Rs.	Rs.	Rs.
Drugs, not intoxicating	1,60,625	5,06,192	5,78,425
Dyes	2,74,826	95,533	48,023
Fruits	2,38,683	4,58,702	7,48,883
Hides	1,86,594	2,97,517	7,98,160
Skins	1,39,386	3,43,350	5,63,065
Ghī	16,50,172	20,05,849	30,02,974
Linseed	1,235	6,55 674	73,952
Wool : —			
Manufactured piece-goods	5,91,439	7,51,365	10,75,047
Shawls	2,19,275	15,600	1,000

The value of fruits exported is increasing steadily, and would expand further with more rapid communications. *Ghī* also is a very important export. Perhaps one of the most remarkable increases is that in linseed, which possessed very little value before the opening of the cart-road. The trade in shawls was practically dead before 1892–3. An important new staple not included in the list must be noticed. Raw silk produced in the Kashmīr Valley has been exported in rapidly increasing quantities and values, and there are indications that it will become one of the most important products of the country. The value increased from Rs. 7,000 in 1897–8 to 13·6 lakhs in 1902–3 and nearly 21 lakhs in 1904–5.

Another item of some importance is the trade which passes through Kashmīr between India, Chinese Turkistān, and Tibet via Leh. In 1904–5 the total value of this trade was 61·2 lakhs. It is subject to considerable fluctuations, owing to great physical difficulties, the keen rivalry of Russia, and the passive obstruction of Tibet. During the ten years ending 1901 the average value was 44·3 lakhs, the maximum being 62·2 lakhs in 1895–6, and the minimum 30·1 lakhs in 1891–2. The imports from Central Asia into Ladākh amounted to 17·8 lakhs. Of this, about 14 lakhs came from Chinese Turkistān and the balance from Tibet. Goods to the value of 11·3 lakhs found their way to the Punjab via Kashmīr, others going via Kulū. The chief articles were raw silk (5·9 lakhs), Russian gold coins (4·3 lakhs), raw wool (3 lakhs), and *charas* (2·2 lakhs). The exports from Ladākh to Central Asia amounted to 11·4 lakhs. Of this, goods to the value of 10 lakhs went to Chinese Turkistān and the remainder to Tibet. The more important articles of export were: European cotton piece-goods (3·4 lakhs); coral (1·2 lakhs); silk goods, European (1·8 lakhs), Indian (Rs. 54,000). The value of trade passing from India to Ladākh was 14·3 lakhs.

Communications.

The nature of the country renders communications difficult. In the valley proper the Jhelum forms a great waterway, but other rivers are not navigable. Throughout the greater part of the State the roads are chiefly fair-weather tracks and are not used for wheeled traffic. A cart-road has, however, been constructed from Srīnagar, through Bāramūla and down the Jhelum valley, to Abbottābād in the North-West Frontier Province and to Murree in the Punjab, while another cart-road is being constructed from Srīnagar to Udhampur. The principal roads within the State lead from Srīnagar to Islāmābād and Jammu over the Banihāl pass (9,200 feet); to Shupiyan, Bhimbar, and Gujrāt in the Punjab over the Pīr Panjāl (11,400); to Gandarbal and Ladākh over the Zoji La (11,300); and to Gilgit over the Rājdiangan (11,700), and Burzil (13,500), or Kamrī (13,100). Much has been done in recent years to improve these routes and a number of smaller roads, such as that from Srīnagar to Gulmarg, which is practicable for tongas. A road cess amounting to 2½ per cent. on the revenue has been imposed, in place of the forced labour which used to be exacted. The Jhelum is crossed by several wooden bridges on the cantilever principle at Srīnagar, and over the hill torrents swing frail suspension bridges consisting of cables made of plaited twigs or buffalo-hide. The latter sometimes reach a span of 300 feet, and are renewed every three years, if they have not been carried away meanwhile by floods.

The only railway at present is a short length of 16 miles, constructed at the cost of the State, which is included in a branch of the North-Western State Railway from Wazīrābād through Siālkot. It cost

9·6 lakhs, and has usually earned a net profit of 1 to 2½ per cent., in addition to the rebate allowed from traffic exchanged with the North-Western Railway. A line has been surveyed along the Jhelum valley route, and it is proposed to work this by electricity derived from the river.

The State is included for postal purposes in the circle administered by the Postmaster-General of the Punjab and North-West Frontier Province. Formerly Kashmīr had its own postal service and used its own postage stamps, but as far back as 1876 there were British post offices in Srīnagar and Leh. The State stamps were used only for local purposes, and letters and other postal articles passing between the State post offices and British India were charged with both Kashmīr and Indian postage. In 1894 the State posts were entirely amalgamated with the Indian postal system. The following statistics show the advance in postal business since 1880–1:—

	1880-1.	1890-1.	1900-1.	1903-4.
Number of post offices	2	2	81	78
Number of letter boxes	...	...	199	207
Number of miles of postal communication	...	...	1,588	1,678
Total number of postal articles delivered:—				
Letters	48,126	138,216	1,414,140	1,519,674
Postcards	3,406	26,858	1,209,182	1,639,430
Packets	832	16,146	96,356*	166,400
Newspapers	4[illegible],978	70,226	193,414†	246,974
Parcels	1,742	1,914	32,786	77,402
Value of stamps sold to the public Rs.	‡	‡	81,030	1,06,028
Value of money orders issued Rs.	‡	‡	3,10,591	16,37,787

* Including unregistered newspapers. † Registered as newspapers in the Post Office.
‡ The figures are included in those of the Punjab.

Famine.

The accounts of early famines are vague, but it is known that famines occurred. While Sher Singh was governor (1831–3) severe distress was felt and many people fled, but the next governor, Miān Singh, did much to restore prosperity by importing grain. It is said that the population was reduced to a quarter in that famine. In 1877–9 a worse disaster was experienced and the loss of life was enormous. Famines in Kashmīr are not caused by drought, as in India, because the rice crop is generally protected by irrigation. The greatest distress is due to the fall of rain or snow while the rice and maize are ready for harvest. The famine of 1832 was caused by early snow, and was aggravated by the floods which followed. In 1877 rain fell almost continuously for three months, and the old system of collecting revenue in kind prevented cultivators from gathering their crops when opportunity served. Food-grains were not to be had; and

when imports were made at the expense of the State, the corrupt officials were the chief persons to profit. It is improbable that such distress can be experienced again, owing to the construction of a cart-road, and the change in the method of collecting revenue.

The State is in direct relationship with the Government of India, who is represented by an officer of the Political department, styled the Resident. His head-quarters are at Srīnagar. At Gilgit a Political Agent exercises some degree of supervision over the Wazīr Wazārat, and is directly responsible to the Government of India for the administration of the outlying petty States. A British officer is stationed at Leh to assist in the supervision of Central Asian trade.

Administration.

On his accession to the *gaddi* in 1885, the present Mahārājā was entrusted with the administration of the State, aided by two ministers; but in 1887, at his own request, he was relieved from all part in the administration, which was then placed, subject to the control of the Resident, in the hands of a Council consisting of His Highness's brother and two selected officials from the British service. In 1891 the Mahārājā assumed the presidentship of the Council, while his brother, Rājā Sir Amar Singh, K.C.S.I., became vice-president. The Council was abolished in 1905, and its powers were conferred on the chief himself. Under the new arrangements the Mahārājā administers the State. There are three ministers, in charge of the revenue, judicial, and home departments; but business requiring the orders of the Mahārājā is laid before him by the chief minister, Rājā Sir Amar Singh. For some time past the departments of finance, revenue settlement, forests, and public works have been in charge of British officers, whose services have been temporarily placed at the disposal of the Darbār.

The four chief executive officers are: the governor or Hākim-i-Ala of Jammu, the governor of Kashmīr (each aided by a general assistant), the Wazīr Wazārat of Gilgit, and the Wazīr Wazārat of Ladākh.

In Jammu there are five districts, each in charge of a Wazīr Wazārat, an official whose average salary is Rs. 250 a month. Under the Wazīr Wazārat are *tahsīldārs* and sometimes subdivisional officers. All these officers exercise revenue, civil, and criminal jurisdiction, with regular stages of appeal. In revenue cases the appeal lies to the governor, and from him to the revenue minister. In civil and criminal judicial cases the appeal lies to the Chief Judge of Jammu. From him there is an appeal to the judicial minister, who is virtually the final court, and it is only on rare occasions that an appeal is made from him to the Mahārājā. All death sentences passed by the Chief Judge require the confirmation of the Mahārājā. In 1900–1 there were eighty-one courts of all grades, of which eight exercised criminal jurisdiction only. Although there is a centralized form of government, as in British India, the real power

rests with the *tahsīldār*, and distance and the absence of easy communications are practical checks on the use or abuse of appeals.

Legislation and justice.

Before 1892, when the law of limitation was introduced into Jammu, litigation was not very heavy and the people frequently settled their differences out of court. The improvement in the courts, and the effects of this alteration in the law, are shown by the fact that the number of suits for money or movable property increased from an average of 3,735 during the ten years ending 1890 to 10,766 in the next decade, and was 12,160 in 1900–1. The system of registration for deeds resembles that in British India. In 1900–1 the number of documents registered was 1,348.

Crime is not serious in the Jammu province; but there has been an increase in cases of theft, hurt, and mischief, due to the greater activity of the police force, which is being gradually assimilated to the rules and procedure prevailing in British India. In the whole State 17,320 persons were brought to trial in 1900–1, of whom 2,169, or 13 per cent., were convicted.

In Kashmīr the *tahsīls* in the valley are superintended by the governor himself, while those of the Muzaffarābād district are in charge of a Wazīr Wazārat subject to the governor and the Chief Judge, whose offices are in Srīnagar

Finance.

The finances of the State are immediately controlled by an accountant-general, who for some years has been lent by the British Government. The revenue and expenditure for 1895–6, 1900–1, and 1905–6 are shown in Tables IV and V at the end of this article (pp. 146 and 147). In the last year the total revenue was 93 lakhs, the chief items being land revenue (38·9 lakhs), forests (13 lakhs), customs and octroi (9·2 lakhs), and scientific and minor departments (2·2 lakhs) The expenditure of one crore included public works (30·8 lakhs), military (13·8 lakhs), privy purse and courts (10·9 lakhs), scientific and minor departments (2·1 lakhs), and land revenue (6·1 lakhs). The State is very prosperous, and has more than 46 lakhs invested in securities of the Government of India.

The British rupee is now the only rupee used in the State. Previously three coins were current: namely, the *khām* rupee, value 8 annas, bearing the letters J. H. S. (these letters have given rise to many stories, but they were really a mint-mark to indicate Jammu, Hari Singh); the *chilki* rupee, value 10 British annas; the *Nānak shāhi* rupee, value 12–16 British annas.

The *kharwar* or ass-load, which has for centuries past been the standard of weight, is equivalent to 177⅓ lb The word is usually abbreviated to *khar*. Land measures are calculated not by length and breadth, but by the amount of seed required by certain areas of rice

cultivation. It has been found by measurements that the *kharwar* of land—that is, the rice area which is supposed to require a *kharwar's* weight of rice-seed—exactly corresponds to 4 British acres. For length, the following measure is used :—

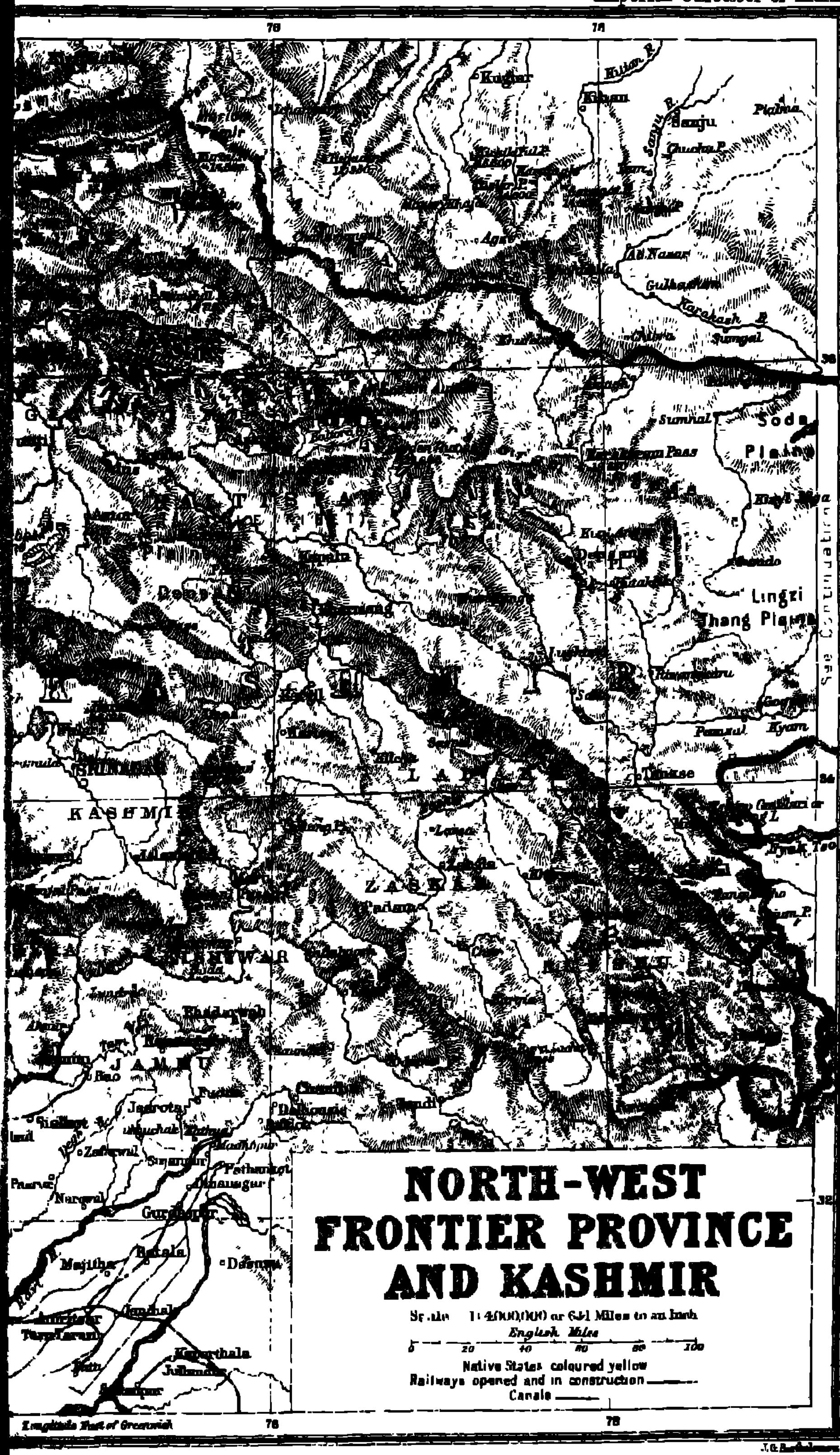
1 *gira* = $2\frac{1}{4}$ inches.
16 *giras* = 1 *gaz*.
20 *giras* = 1 *gaz*, in measuring *pashmīna* cloth.

There is no sealed yard measure in Srīnagar, but from frequent experiment it was found that the *gaz* of 16 *giras* is about half an inch longer than the British yard.

Land revenue.

The land revenue system has been described as '*ryotwāri* in ruins.' It is probable that the methods of administration introduced under Akbar led to a fictitious joint responsibility, but this was never fully accepted. The land was regarded as the absolute property of the State, and the cultivators were merely tenants holding from year to year, with no rights in the waste land. Within the village, however, the cultivators recognized the acquisition of what may be called a right of occupancy acquired by long prescription (*mīrās*). At the settlement which commenced in 1887 this custom was accepted by the State, and permanent hereditary rights were conferred on persons who agreed to pay the assessment fixed on the land entered in their names. The right is not alienable by sale or mortgage, and the holder is called an *asāmī*. Besides the ordinary village occupants there were grantees, but these have gradually been converted into *asāmīs*.

Under the local Sultāns the State share of produce was reckoned at one-half, and this was increased to three-quarters by the Mughals. In the absence of any survey or record of rights, the revenue administration was harsh and corrupt. Land agents called *kārdārs* were appointed who parcelled out the land annually, the area of land allotted to each family being regulated by the number of individuals it contained. The State took three-fourths of rice, maize, millets, and buckwheat, and nine-sixteenths of oilseeds, pulses, and cotton. In 1860 the share was reduced to one-half, and villages were made over to contractors called *chakladārs*, who robbed the cultivators and the State. An attempt was made in 1873 to introduce a *ryotwāri* settlement for three years, but the interests of the *chakladārs* and corrupt officials were too strong to allow such an innovation. Abul Fazl, in the *Ain-i-Akbarī*, notes that revenue was chiefly paid in kind in Kashmīr, and it was not till 1880 that a so-called cash assessment was introduced. This was made by taking the average collections for the previous three years in each village, and adding a considerable proportion, never less than 30 per cent. ; but as a matter of fact, it was left to an official to decide how much revenue should be taken in cash, and how much in kind. There was no pretence of inspecting villages, or of distributing the demand


NORTH-WEST
FRONTIER PROVINCE
AND KASHMIR
English Miles
0 20 40 60 80 100
Native States coloured yellow
Railways opened and in construction
Canals
Kugiar
Sanju
Karakash R.
Soda
Plains
Lingzi
Thang Plains
Karakoram Pass
SRINAGAR
KASHMIR
ZASKAR
Padam
JAMMU
Jasrota
Zafarwal
Pathankot
Narowal
Gurdaspur
Batala
Majitha
Amritsar
Kapurthala
Dalhousie
Chamba
Jullundur
Longitude East of Greenwich
76
78
32
34
36

fixed for a whole village over separate holdings, and the dislocation caused by the famine of 1877–9 added to the evils of such summary procedure. Two years later a system of auctioning villages was introduced, which led to even greater abuses, while the commutation rates for grain were altered, so as to injure the cultivators.

In 1887 a regular settlement was commenced in the valley by a British officer, lent by Government. It was preceded by a complete survey, and the revenue was fixed for ten years. Villages were classified according to their position, and standard out-turns of produce were calculated. In estimating the produce, allowance was made for walnut-trees, fruit trees, apricots, and honey. The assessment was also checked by considering the collections in previous years and reports made by former contractors. Its moderation and even distribution are attested by the return of the cultivators who had fled during the disastrous famine. When the settlement was completed in 1893, it had cost 3·4 lakhs and had raised the revenue by 1·9 lakhs annually. A revision was commenced in 1898 and completed in 1905, the methods employed being similar to those followed at the first regular settlement. This has further raised the revenue in the valley from 13·4 to 17 lakhs, or by 27 per cent. The incidence of revenue varies from about 10 annas to Rs. 12 per acre, and represents an all-round rate of about 30 per cent. of the gross produce. Regular settlements have also been completed in other parts of the State, such as Gilgit, Jammu, and Baltistān. The total receipts from land revenue in 1905–6 amounted to 38·9 lakhs.

Miscellaneous revenue.

The Excise department of the State is chiefly concerned with the manufacture and sale of liquor, including wine and brandy, at the Gupkar distillery. In 1900 the administration was examined by an officer lent by the British Government, and as a consequence private distilleries in the province of Jammu were entirely closed. The total receipts in 1900 1 were only Rs. 50,000, but by 1905 6 they had risen to Rs. 1,37,000.

In 1905–6 the total revenue from stamps was 2·22 lakhs, of which 1·6 lakhs represented receipts from judicial stamps.

A considerable revenue is derived from customs and octroi levied on the trade which passes into the State. The receipts amounted to 9·2 lakhs in 1905–6.

Cesses are levied, amounting to 12½ per cent. on the land revenue, for the following objects: payments to *lambardārs* (village headmen), 5 per cent.; *patwāris* and *zaildārs*, 4¼ per cent.; education, ¾ per cent.; and roads, 2½ per cent.

There are two municipal committees in the State: one at Srinagar, and the other at Jammu, presided over by the chief medical officer, Kashmir, and the governor of the Jammu province, respectively. The

members are nominated by the Darbār as representatives of different communities. There is no separate municipal fund; the State provides the expenditure for municipal and sanitary purposes, while the receipts, such as octroi, are likewise credited to the general revenues. The expenditure in 1905–6 was Rs. 92,000, of which Rs. 6,400 was met from fees and taxes and the balance by a grant from the State. In other towns conservancy establishments are maintained, which are under the municipal committee of the province in which the town is situated. Great improvements have lately been made in the drainage system of Jammu town.

Local and municipal.

The expenditure on public works in 1905–6 was 30·8 lakhs, and will always be heavy. The maintenance of long lines of communication between Kashmīr and India and between Kashmīr, Gilgit, and Ladākh, the cost of buildings in Srīnagar and Jammu, and the enormous losses which have to be repaired when great floods and earthquakes occur render a large annual outlay inevitable. The road from Kohāla to Bāramūla alone cost 22 lakhs to construct, and the road from Kashmīr to Gilgit cost, in the first instance, 15 lakhs. In 1901 the construction of a cart-road from Jammu to Udhampur was sanctioned. In 1905–6 the utilization of the Jhelum river for a great electric power scheme was taken in hand, and 4·6 lakhs was spent on it. The State Engineer is usually an officer lent by the British Government; and the State is divided into eight divisions, known as Kashmīr, Jammu, the Jhelum valley, Gilgit, Udhampur cart-road, Palace, Jhelum power, and Jammu irrigation.

Public works.

The expenditure on the army is heavy, amounting to nearly 14 lakhs in 1905–6, but the administration is sound and economical, and there is considerable efficiency. The State has splendid materials for an army, as the Dogrās are, in the opinion of competent authorities, second to none in martial qualities. The commander-in-chief up to the year 1900 was assisted by a British officer as military adviser. The first military adviser was Colonel (afterwards Sir) Neville Chamberlain, to whose energy and tact the State owes its present efficient and well-equipped force. The army consists of two mountain batteries, one horse artillery and one garrison battery, one squadron Kashmīr Lancers, one troop body-guard cavalry, 7 regiments of infantry, and 4 companies of sappers and miners, with a total strength of 6,283. Out of this the State maintains a force of 3,370 Imperial Service troops, the remainder being called regular troops. Jammu, the winter capital, has a strong garrison. Imperial Service troops are stationed at Satwāri cantonment, about 5 miles from Jammu, on the opposite bank of the Tāwi river. Two regiments of regular infantry and a garrison battery are stationed at Srīnagar, and small

Army.

detachments of infantry are detailed from this garrison for Bandipura, Leh, Skārdu, Padar, and various other posts. The troops in Gilgit, the northernmost part of the State, consist of two regiments of Imperial Service infantry, a battery of four mounted guns, and two companies of the Kashmīr sappers and miners. Detachments of infantry are supplied to the frontier posts of Gupis, Chilās, &c., and the battery is stationed at Bunji and Ruttoo. The troops at the Gilgit, Ladākh, and Skārdu frontiers are relieved biennially. The Imperial Service infantry regiments are armed with Lee-Metford rifles, and the regular regiments with Enfield-Sniders. The mountain batteries are equipped with 2·5-inch guns, and the cavalry are armed with lances and carbines. A number of forts partially armed are scattered all over the country. The State army is commanded by General Rājā Sir Amar Singh, K.C.S.I., younger brother of the Mahārājā.

Police and jails.

Serious crime is rare, and the force of regular police is comparatively small. It includes 3 assistant superintendents, 9 inspectors, 297 subordinate officers, and 1,213 constables, costing about 2·2 lakhs annually. The force is controlled by two Superintendents for the chief provinces of Jammu and Kashmīr. Police duties in the villages are performed by the *chaukīdārs*, who are generally Dums in the Jammu province, and are paid by the villagers. The responsibility of the headman for reporting crime is insisted on. A training school for regular police is maintained, and the system of identifying convicts by thumb impressions has been introduced. In 1904–5 only 2,076 cognizable cases were reported, of which 640, or 30 per cent., ended in conviction.

Central jails are maintained at Jammu and at Srīnagar, and seven small jails in outlying places. Both the Central jails are usually overcrowded, the daily average number of prisoners in 1904–5 being 543. The expenditure in the same year was Rs. 47,000 on the Central jails, and Rs. 3,600 on the others; and in 1905–6 a total of Rs. 54,000. Convicts are employed in printing, paper-making, and other minor industries in the Srīnagar jail, and in printing, weaving, and manufacturing industries at Jammu. The receipts from jail manufactures in 1905–6 were Rs. 18,000.

Education.

The Census of 1901 showed how little attention was formerly paid to education. In that year only 2 per cent. of the population could read and write. Among males the proportion rises to 3·8 per cent., while among the total female population only 1,260 were literate. Hindus appear to be much better educated than Muhammadans. In 1900–1 the State maintained 87 schools, attended by 6,197 boys. By 1905–6 the number of State schools had risen to 154, including two high schools, a normal school, 7 Anglo-vernacular and 12 vernacular middle schools, and 133 primary

schools. Besides these, 3 girls' schools are maintained by the State at Srīnagar; and there are one aided girls' school at Jammu, two aided high schools and an aided middle school at Srīnagar, and an aided middle school at Jammu. Sanskrit schools attached to the State high schools, one at Jammu and the other at Srīnagar, teach up to the Shāstri standard. The total number of pupils in all the schools was 11,460. The department is under the control of the foreign minister, who is aided by an inspector and two assistant inspectors of schools. There being no State college, 17 scholarships are annually granted by the Darbār to students for prosecuting their studies at colleges at Lahore. Two scholarships of Rs. 4,000 each have also been sanctioned for training State subjects abroad in useful arts, &c. Ten stipends of the value of Rs. 8 a month are granted in the Srīnagar normal school, and thirteen of the value of Rs. 1,944 are awarded to students sent up for training in the normal school and training college at Lahore, while two teachers are annually sent to the latter on the full pay of their appointments. The total expenditure on education in 1905-6 was 1·05 lakhs, compared with only Rs. 45,000 in 1900-1.

An Arts college was opened at Srīnagar in 1905 by the trustees of the Central Hindu College, Benares, in connexion with the Hindu high school, and the Mahārājā has sanctioned a grant-in-aid of Rs. 15,600 per annum for the college and school from the year 1906.

Medical.

The State maintains at Srīnagar two hospitals, two dispensaries with accommodation for in-patients, and a leper asylum, and at Jammu two hospitals for the civil population, besides military hospitals at Jammu and at Satwāri cantonment. In 1904-5, besides these, 43 dispensaries were maintained in the State. Two chief medical officers are in charge of the Jammu and Kashmīr provinces, and the Agency Surgeon supervises work in Gilgit. The Medical department of the State is under the control of a Superintending Surgeon. In 1904-5 the total number of patients treated was 401,120, of whom 4,338 were in-patients, and 11,830 operations were performed. The expenditure was 1·5 lakhs. In addition to the State institutions, valuable work is being done by the Medical Mission, which has a large hospital at Srīnagar and a hospital at Anantnāg. The leper asylum referred to above is also managed by them for the Darbār.

The staff for vaccination consists of eighteen men, who work in the province of Jammu in winter, and in that of Kashmīr in summer. Vaccination is not compulsory, but a good deal of work is done by the exercise of tact and moral persuasion. In 1904-5 the number of persons successfully vaccinated in both provinces was 33,784, while 4,200 vaccinations were also carried out in Gilgit. The people of Ghizar, Yāsīn, Ashkuman, and Chilās districts formerly refused vaccina-

tion, but are now accepting it. The total expenditure in 1905–6 was Rs. 5,685. Inoculation is practised by the people in the frontier districts, but not elsewhere.

[F. Bernier: *Voyages* (1699).—G. T. Vigne: *Travels in Kashmir, Ladak, Iskardo* (1842).—A. Cunningham: *An Essay on the Arian Order of Architecture as exhibited in the Temples of Kashmīr* (1848).—J. Biddulph: *Tribes of the Hindu Koosh* (1880).—Drew: *Jammu and Kashmīr Territories* (1875).—E. F. Knight: *Where Three Empires meet* (1893).—W. R. Lawrence: *The Valley of Kashmīr* (1895).—Kalhana's *Rājataranginī, a Chronicle of the Kings of Kashmīr*, translated by M. A. Stein, 2 vols. (1900).]

TABLE I.—Temperature, Kashmīr

Station.	Height in feet of Observatory above sea-level.	Average temperature (in degrees F.) for twenty-two years ending with 1905 in							
		January.		May		July.		November.	
		Mean.	Diurnal range.	Mean.	Diurnal range.	Mean.	Diurnal range.	Mean.	Diurnal range.
Srīnagar * . . .	5,204	33·2	14·2	63·9	24·0	74·3	20·8	46·4	28·1
Leh	11,503	19·1	20·4	49·9	26·3	63·3	26·9	34·0	26·3

* The figures here are for fourteen to fifteen years only.

Note.—The diurnal range is the average difference between the maximum and minimum temperature of each day.

TABLE II.—Rainfall, Kashmīr

Station.	Average rainfall (in inches) for twenty-nine years ending with 1905 in												
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total of year.
Srīnagar * . .	3·13	2·24	3·58	3·29	2·93	1·67	3·03	2·26	1·64	1·12	0·47	1·34	26·70
Leh . . .	0·33	0·32	0·30	0·20	0·21	0·16	0·47	0·47	0·21	0·18	0·03	0·17	3·05

* The figures here are for fourteen to fifteen years only.

TABLE III.—Distribution of Population, Kashmīr, in 1901

Districts.	Area in square miles.	Number of towns.	Number of villages.	Total Population.			Urban Population.			Mean density per square mile.‡
				Persons.	Males.	Females.	Persons.	Males.	Females.	
Jammu	...	1	1,190	344,018	185,722	158,296	36,130	22,221	13,909	267
Udhampur	...	...	1,055	284,048	151,425	132,623	...	...	...	184
Bhimber	...	...	1,019	400,229	210,075	190,154	...	...	...	233
Jasrota	...	...	584	154,213	82,391	71,822	...	...	...	193
Pūnch, Bhadarwāh } *Jāgīrs*	...	...	624	338,799	178,179	160,620	...	...	...	...
Total, Jammu province	5,223 *	1	4,472	1,521,307	807,792	713,515	36,130	22,221	13,909	...
Khas	...	1	2,919	989,196	526,158	463,038	122,618	65,542	57,076	164
Muzaffarābād	...	...	827	168,198	90,729	77,469	...	...	...	64
Total, Kashmīr province	7,922 †	1	2,746	1,157,394	616,887	540,507	122,618	65,542	57,076	131
Ladākh	...	...	464	165,992	83,600	82,392	...	...	...	419
Gilgit	...	...	264	60,885	33,778	27,107	...	...	...	1,295
Total, Frontier districts	443 †	...	728	226,877	117,378	109,499	...	...	...	512
Total, State	80,900	2	8,946	2,905,578	1,542,057	1,363,521	158,748	87,763	70,985	36 §

* Of this area, 2,260 square miles are assessed and 2,957 estimated. It does not include the *Jāgīrs*.
† Assessed area only.
‡ Calculated on area actually cultivated.
§ Calculated on total area.

TABLE IV

PRINCIPAL SOURCES OF REVENUE, KASHMĪR

(In thousands of rupees)

	1895-6.	1900-1.	1905-6.
Opening balance	29,53	41,12	38,26
Land revenue	35,73	38,78	38,91
Customs and octroi	4,22	7,61	9,18
Grazing fees	2,37	3,33	4,84
Excise	37	50	1,37
Receipts from State property in India	1,91	42	36
Stamps	1,37	1,75	2,22
Courts of law	27	30	32
Jails	5	7	19
Post Office	11	...	...
Telegraphs	3	6	8
Scientific and minor departments	7,71	2,70	2,22
Sericulture	7	2,67	14,02
Interest	81	1,49	2,98
Forests	8,09	8,83	13,01
Military	25	29	35
Public works	14	48	58
Miscellaneous	3,90	5,28	2,36
Total	67,40	74,56	92,99
Debt and remittance	1,42,70	1,77,04	3,61,73
GRAND TOTAL	2,39,63	2,92,72	4,94,98

TABLE V

Principal Items of Expenditure, Kashmīr

(In thousands of rupees)

	1895-6	1900-1.	1905-6.
Land revenue	3,15	4,77	6,12
Customs	...	75	1,30
Forests	2,55	2,95	3,98
Post Office	16	...	...
Telegraphs	77	26	29
Privy purse and court	9,24	8,46	10,87
General administration	1,78	2.49	3,27
Courts of law	68	88	1,22
Jails	32	47	54
Police	1,48	1,97	2,05
Education	37	50	1,05
Medical	82	1.39	1,57
Political	1,74	2,36	9,38
Scientific and minor departments	72	1,05	2,11
Sericulture	15	4,63	7,53
Pensions and gratuities	1,10	1,34	1,32
Stationery and printing	20	64	48
Stables, &c.	1,01	1,54	1,47
Refunds	36	25	54
Military	13,44	11.69	13,82
Public works	12,62	15,80	30,80
Miscellaneous	8,57	1,33	1,71
Total	61,23	55,52	1,01.42
Debt and remittance	1,54,27	1 81,53	3,57,03
Total	2,15,50	2,47.04	4,58,45
Closing balance	24,13	45,68	34,53
GRAND TOTAL	2,39,63	[illegible],92.72	4,92,98

Kashmor.—*Tāluka* of the Upper Sind Frontier District, Sind, Bombay, lying between 28° 4′ and 28° 29′ N. and 69° 15′ and 69° 47′ E. In 1901 the area was 500 square miles. The population in 1901 was 38,179, compared with 35,763 in 1891. The density, 77 persons per square mile, is much below the District average. The *tāluka* contained 65 villages, of which Kashmor is the head-quarters. The land revenue and cesses amounted in 1903–4 to 1·2 lakhs. Owing to the vagaries of the Indus, the present area of the *tāluka* is 508 square miles, of which about 37 square miles are covered by forests. A large area of land is still unoccupied and available for cultivation. Irrigation depends upon floods and upon the Desert and Dingro Wah Canals and canals from the Kashmor Band.

Kasiā.—Subdivision of Gorakhpur District, United Provinces, comprising the PADRAUNĀ TAHSĪL. The subdivision takes its name from the village of Kasiā, at which the head-quarters of the sub-divisional officer are situated. Population of the village (1901), 1,688. The village is situated at the junction of the Deoriā-Padraunā and Gorakhpur-Piprāghāt roads, near the bank of the Rāma Bhār lake, and contains a dispensary and a town school with 114 pupils. A short distance away, in the village of Bishanpura, is situated the important group of ruins which was long supposed to mark the site of Kusanagara, where Gautama Buddha died. The ruins include a large *stūpa* and many small ones, the remains of a monastery, and a temple which enshrines a colossal statue of the dying Buddha, 20 feet in length. It has now been recognized that the buildings on this site do not agree with the description of Kusanagara given by the Chinese pilgrims.

[A. Cunningham, *Archaeological Survey Reports*, vols. xviii and xxii; V. A. Smith, *The Remains near Kasiā* (1896), and in *Journal, Royal Asiatic Society*, 1902, p. 139; W. Hoey, *Journal, Asiatic Society of Bengal*, 1900, p. 83.]

Kāsimbāzār.—Decayed town in Murshidābād District. Bengal. *See* COSSIMBAZĀR.

Kāsipur-Chitpur.—Town in the District of the Twenty-four Parganas, Bengal. *See* COSSIPORE-CHITPUR.

Kasla Pagina Muvāda.—Petty State in REWĀ KĀNTHA, Bombay.

Kasumpti.—Suburb of Simla station, Punjab. It lies within the territory of the Rājā of Keonthal, but being practically part of Simla was leased from the Rājā in 1884, and constituted a separate municipality, whose functions are performed by the Deputy-Commissioner of Simla. The municipal income and expenditure during the ten years ending 1902–3 averaged Rs. 5,600. In 1903–4 the income was Rs. 6,200, chiefly from taxes on houses and lands; and the expenditure was Rs. 6,300. Population (March, 1901), 170.

Kasūr Subdivision.—Subdivision of Lahore District, Punjab, consisting of the KASŪR and CHŪNIĀN *tahsīls*.

Kasūr Tahsīl.—South-eastern *tahsīl* of Lahore District, Punjab, lying between 30° 54′ and 31° 27′ N. and 74° 13′ and 74° 58′ E., on the north bank of the Sutlej, with an area of 816 square miles, of which two-thirds belong to the tract known as the MĀNJHA and the remainder to the lowlands beneath the old bank of the Beās. The Mānjha portion is irrigated by the Bāri Doāb Canal, and the southern lowlands by the Katora Inundation Canal. The population in 1901 was 311,690, compared with 280,647 in 1891. The head-quarters are at the town of KASŪR (22,022); and it also contains the towns of KHEM KARAN (6,083) and PATTĪ (8,187), and 345 villages. The land revenue and cesses in 1903–4 amounted to Rs. 3,71,000. The battle-field of SOBRAON lies in this *tahsīl*.

Kasūr Town.—Head-quarters of the subdivision and *tahsīl* of the same name in Lahore District, Punjab, situated in 31° 8′ N. and 74° 28′ E., upon the north bank of the old bed of the Beās, on the North-Western Railway and on the Ferozepore road, 34 miles south-east of Lahore city; distant by rail from Calcutta 1,209 miles, from Bombay 1,237, and from Karāchi 778. Population (1901), 22,022, of whom 5,327 are Hindus and 16,257 Muhammadans. Tradition refers its origin to Kusa, son of Rāma, and brother of Loh or Lava, the founder of Lahore. It is certainly a place of great antiquity, and General Cunningham identified it with one of the places visited by Hiuen Tsiang in the seventh century A.D. A Rājput city seems to have occupied the modern site before the earliest Muhammadan invasion; but Kasūr does not appear in history until late in the Muhammadan period, when it was settled by a Pathān colony from the east of the Indus. These immigrants entered the town either in the reign of Bābar or in that of his grandson Akbar, and founded a considerable principality, with territory on both sides of the Sutlej. When the Sikhs rose to power, they experienced great opposition from the Pathāns of Kasūr; and, though the chiefs of the Bhangī confederacy stormed the town in 1763, and again in 1770, and succeeded for a while in holding the entire principality, the Pathān leaders re-established their independence in 1794, and resisted many subsequent attacks. In 1807, however, Kutb-ud-dīn Khān, the last chieftain, was forced to give way before Ranjīt Singh, and retired to his property at MAMDOT, beyond the Sutlej. The town of Kasūr was then incorporated in the kingdom of Lahore. It consists of an aggregation of fortified hamlets, standing on the upland bank and overlooking the alluvial valleys of the Beās and the Sutlej. The Pathān element has now declined. The municipality was created in 1867. The income during the ten years ending 1902–3 averaged Rs. 52,800, and the

expenditure Rs. 50,900. In 1903-4 the income and expenditure were Rs. 60,400 and Rs. 54,500 respectively. The chief source of income was octroi (Rs. 50,000), while the main items of outlay were conservancy (Rs. 4,000), education (Rs. 8,500), hospitals and dispensaries (Rs. 6,300), and administration (Rs. 18,800). Kasūr is now, next to Lahore, the most important town in the District. It is the centre of local trade, and exports grain and cotton to the annual value of 10 lakhs. Harness and other leathern goods are manufactured, and there are 4 cotton-ginning and 2 cotton-pressing factories, which in 1904 employed 436 hands. The chief educational institution is the Anglo-vernacular high school maintained by the municipality. An industrial school formerly existed, but is now extinct. The town also contains a hospital, and since 1899 has been an out-station of the American Presbyterian Mission.

Katak.—District, subdivision, and town in Bengal. *See* CUTTACK.

Kātākhāl.—River in Cāchār District, Eastern Bengal and Assam. *See* DHALESWARI.

Katās.—Sacred pool in the centre of the Salt Range, in Jhelum District, Punjab, situated in 32° 43′ N. and 72° 59′ E., 15 miles north of Pind Dādan Khān, at an elevation of over 2,000 feet. The pool lies at the head of the Ganīya nullah, a small ravine between low stony hills, and is fed by springs. From it issues a small stream which flows past Choa Saidān Shāh into the Gandhāla valley. It is visited every year by thousands of pilgrims who come to bathe in its waters. The Brāhmanical story is that Siva being inconsolable at the death of his wife Satī, 'the true one,' tears rained from his eyes and formed the two pools of Katās or Katāksha, 'raining eyes,' and Pushkar near Ajmer. The pool is partly artificial, the rock having been cut away to enlarge the natural basin in the bed of the ravine. Just above it once stretched a strong masonry wall which dammed up the stream, so as to enclose a large lake; but the water now escapes through the broken rocks and ruins of the embankment. About 800 feet below the pool the Ganīya nullah passes between two low flat-topped hills, on which the ancient town is said to have stood. At the foot of Kotera, the west hill, are the remains of twelve temples clustered in a corner of an old fort. These are called the Sat-Ghara, or 'seven temples,' and are popularly attributed to the Pāndavas, who are said to have lived at Katās during a portion of their seven years' wanderings. Their style is that of the Kashmīr architecture which prevailed from the eighth to the thirteenth century, and they comprise a group of six small temples placed in pairs at regular distances around one large central temple. Facing this to the east is the basement of a great structure, which was in all probability a Buddhist *stūpa*.

South-west of the village of Choa Saidān Shāh, which lies 2 miles

due east of Katās, extends the Gandhāla valley, itself 2,000 feet above the sea, and separated by lofty cliffs from Katās on the north. On the bank of the Katās stream, which flows through the valley, lies the hill of Murti, rising on a base of solid sandstone to about 100 feet above the stream, its level top being 225 feet long by 190 broad. On this plateau is a small mound, the remains of a *stūpa*; and close to it once stood a small Jain temple, from the débris of which a considerable quantity of highly ornamented architectural fragments (now in the Lahore Museum) were recovered by Dr. Stein's excavations in 1890. The temple has been identified with a famous Jain shrine where Mahāvīra was supposed to have obtained his enlightenment. The locality is also identified with Singha-pura, the Sang-ho-pu-lo of the Chinese pilgrim Hiuen Tsiang, and described by him as the capital of a dependency of Kashmīr about A. D. 630.

[*Archaeological Survey Reports*, vol. ii, pp. 88 and 90; A. Cunningham, *Ancient Geography of India*, pp. 124–8; *Vienna Oriental Journal*, vol. iv (1890), pp. 80 and 260.]

Kathā District.—District in the Mandalay Division of Upper Burma, lying between 23° 30′ and 25° 7′ N. and 95° 6′ and 96° 42′ E., for the most part along the west bank of the Irrawaddy, with an area of 6,994 square miles. It is bounded on the north by the Upper Chindwin and Myitkyinā Districts; on the east by the Kaukkwe river as far as its junction with the Irrawaddy; thence, by the State of Möngmit (Momeik) and the Shweli river to its mouth, and southwards of this point by the Irrawaddy. The southern boundary abuts on the Ruby Mines and Shwebo Districts, and the western on the Upper Chindwin.

Physical aspects.

With the exception of a small tract east of the Irrawaddy, the greater part of Kathā is a mass of hill country. Three main ranges traverse the District, roughly from north to south, separating its principal streams, but they are of no very great height. Of these, the easternmost is the Gangaw range, which runs southwards from the north-east corner of the District to meet the Irrawaddy at Tigyaing. Its course is, in the main, parallel to that of the stream, and its highest point is 4,400 feet above sea-level. The principal pass crossing it is at Petsut, 12 miles west of Kathā, over which a small branch line runs from Kathā to Nabā on the main line of the railway, at a height of about 500 feet above the surrounding country. West of the Gangaw Hills is the Minwun range, starting from the extreme northern limit of Kathā, east of the Taungthonlon hill, and running down the centre of the District to its southern boundary, where the Irrawaddy flows about 5 or 6 miles east of the hills. The principal pass over this ridge is the Mawgundaing, crossed east and west by the road from Tigyaing to Wuntho,

about 12 miles west of Tigyaing, at a height of about 1,500 feet. There is a gap in the hills near Mawteik, through which the Meza river has cut from west to east. The Sagaing-Myitkyinā railway on its way north climbs the range by way of a gorge between Bonchaung and Nankan. The third main range, the Mangin, passes through the Wuntho subdivision to the east of the Mu river. Its most elevated point is Maingthon, 5,450 feet above sea-level, a little west of the centre of the District. This is the highest peak actually within the District, though the Taungthonlon, on the north-western border, is a little higher. All three hill ranges are covered with dense jungle, and contain much teak and other valuable timber, besides considerable quantities of bamboo.

The principal rivers are the Irrawaddy, the Kaukkwe, the Shweli, the Meza, the Mu, and the Namyin (or Mohnyin). The Irrawaddy enters Kathā about half-way down its eastern side, and as far south as the mouth of the Shweli separates the greater part of the District from a small level tract on its eastern bank. South of the Shweli it forms the eastern boundary for about 25 miles. It runs with a south-westerly course in what is for the most part a wide channel interspersed with numerous islands, and is navigable all through the year by all sizes of river-craft. The Shweli flows into the Irrawaddy on its left bank, in the south-east of the District, separating Kathā from the Ruby Mines District for about 25 miles. In these lower reaches it is a wide waterway on which boats can ply. The Kaukkwe stream, winding southwards into the Irrawaddy from Myitkyinā, forms the eastern boundary from its confluence with the main stream up to the north-east corner of the District. It can be used by light-draught launches as far as Thayetta (20 miles), and by small river-craft right up into Myitkyinā. Separated from the Irrawaddy valley by the Gangaw range is the malarious Meza valley. The Meza rises in the Taungthonlon hill on the north-west border of the District, and, with its numerous affluents, waters nearly all the Banmauk subdivision. Following a southerly course, it passes through a gap in the Minwun range, and enters the Indaw township near Mawteik, and thence flows southwards between the Gangaw and Minwun ranges, emptying itself eventually into the Irrawaddy, immediately below Tigyaing. The valley between the two eastern hill ranges, followed by the railway for the greater part of its course through the District, is drained in the far north by the Namyin (Mohnyin), a southern tributary of the Mogaung river in Myitkyinā District. In the south-western quarter of the District, lying west of the Mangin range, is the Mu, which rises in the south-west of the Banmauk subdivision and flows in a southerly direction, through the middle of the Pinlebu township, into Shwebo District, but is not navigable within the limits of Kathā. Its tributary

on the east, the Daungyu *chaung*, rises in the Wuntho township, waters the entire Kawlin township, and from its mouth eastwards for more than 30 miles forms the southern boundary of the District.

The Indaw Lake is the only considerable sheet of water in Kathā. It lies close to the railway, 5 miles west of Nabā junction near the centre of the District. It is more than 3 miles long and a mile broad, and is a fishery of some importance. A curious feature of the lake is the absence of any streams flowing either into or out of it.

The Mangin range of hill consists of trap, with veins of gold-bearing quartz, while the eastern part of the District is occupied by crystalline palaeozoic rocks, of which little is known. West of these, a portion of the country is covered by Tertiary sandstones and clays, in which coal has been found near Wuntho. West of this again, a large area of eruptive diorite, associated with volcanic ash, has been laid bare by the denudation of the Tertiary sandstones. The diorite contains veins of auriferous pyrites, the same metal being found also disseminated in the ash-beds. The Minwun range is principally sandstone, and the Gangaw range consists of mica schist in the south and of granite in the north. Limestone also occurs in parts.

The most noticeable features of the vegetation are touched upon under the head of Forests below. The flora is rich and varied, but has not been studied scientifically.

The wild animals usually found in Upper Burma are plentiful. Tigers, leopards, elephants, bison, and *tsine* or *hsaing* (*Bos sondaicus*) roam the jungles in considerable numbers, while bears are common in the more hilly parts. *Thamin* (brow-antlered deer) are fairly numerous in the southern part of the Wuntho subdivision. Wild hog are plentiful everywhere, and do much damage to the crops. The Khedda department are at present working in the District, and have effected considerable catches of elephants, but many of these died of anthrax.

Kathā has a bad reputation for malarial and other fevers. The *tarai* at the foot of the hills is undoubtedly very unhealthy at all times; in the hot months the heat all over the District is great, and the absence of wind at this season and in the rains adds to the discomfort of the residents, while even the cold season is made unhealthy by fogs near the Irrawaddy and the other streams. The temperature has not been regularly recorded; but it has been found to range roughly from 45° at night to 75° in the day in the winter, from 70° to 90° in the rains, and from 80° to 105° in the hot season. In the cold season there are heavy dews. The annual rainfall averages 58 inches at Kathā, and varies in the other portions of the District from 42 inches at Tigyaing in the plains to 67 inches at Banmauk in the hilly areas. The Meza valley between the Indaw

Lake and Meza railway station is subject to inundation. The most notable flood of recent years occurred in 1901, when considerable damage was done to the railway and to other property.

History.

Few details of the early history of the District are known. It is said that during the eleventh century Anawrata, who was then king of Pagan, made a pilgrimage to China in search of relics of Buddha. This led to an endeavour to define the boundary of his territory with China; and from this time onwards the tribes to the north, including those in the neighbourhood of what is now known as Kathā, are said to have acknowledged Burmese suzerainty. The Kachins are reputed at one time to have inhabited a large area in Kathā and to have been gradually pushed back to the northern hills by the Shans and Burmans, but this seems doubtful; in fact, everything points to the pressure having been from the north, and to have been applied by the Kachins, who have, so far as appears, not given ground again. A Chinese army is said to have overrun the District in one of the invasions from the north, but its stay was of brief duration. It established itself at Tigyaing, where portions of the old fort walls are still visible, but it was soon driven out. In 1883 the northern part of the District was invaded by Kachins from the north, who burnt many villages and ravaged a great portion of the country.

Kathā was first occupied by the British early in 1886, and gave some trouble during that and the following year. In course of time the troops, British and Native, were gradually replaced by military police. It was not, however, until the commencement of the year 1890 that the assistance of the regulars could be wholly dispensed with. The character of the country rendered the breaking up of the rebel and dacoit gangs, many of which were headed by ex-Burmese officials and professional brigands, no easy or expeditious matter, and the malarious climate caused the loss of many lives. The District, known in the early years after the annexation as Myadaung, was always noted for its turbulence; and it is gravely recorded that the local village officials (*myothugyis* and *shwehmus*) were formerly compelled to live in specially high houses, and to sleep in coffin like troughs of wood of sufficient thickness to resist a gunshot or the lunge of a spear.

Chief among those who indirectly opposed the British after the annexation was Maung Aung Myat, the Sawbwa of Wuntho, a so-called Shan State lying between Kathā District and the Upper Chindwin. This chieftain seized the opportunity to increase both his power and the area of his State. By various means he succeeded in driving out a number of officials on his borders, and by promises of loyalty and obedience to the British Government he obtained permission to retain as part of the Wuntho State a portion of the

territory thus acquired. It was long, however, before he would meet British officials, and eventually in 1891 a rebellion broke out at his instigation among the Wuntho people. The first signal act of insurrection was the seizure of Banmauk in February. This was followed by an attack upon Kawlin and the burning of the subdivisional headquarters. Other acts of violence were committed and much damage was done to property. The rebels were, however, defeated at Kawlin, at the Kyaingkwin hill between Kawlin and Wuntho, and at Okkan in the Ye-u country; and the rising was suppressed before the end of the hot season, at the cost, however, of a European officer and a number of men. Its immediate result was the incorporation of Wuntho State in Kathā District. The Sawbwa escaped to China, where he is believed to be still living.

The most notable sacred edifices are the Myazedi, the Shwegugyi, the Aingtalu, the Myatheindan, and the Shwebontha pagodas. The Myazedi is situated in the middle of Kathā town, and forms the landmark dividing the northern from the southern quarter. It is said to be one of 84,000 pagodas, each no bigger than a cotton basket, built by a king of Patna, known to the Burmese as Thiridhammathawka Min of Patayipotpyi. U Pathi, a *myothugyi* of Kathā, enlarged the pagoda to its present size and shape in 1832. In 1883 it was greatly damaged by the wild Kachins who occupied the town during the raid referred to above, and what almost amounts to a new shrine has now been built on the old site in the most modern style of Burmese architecture. The Shwegugyi pagoda, built by king Bodawpayā, stands in the northern quarter of Kathā town. The Shwebontha pagoda, situated at Bilumyo, is also said to be one of the 84,000 works of merit aforesaid. Near it are the ruins of an old fortified city. The Aingtalu pagoda stands about 2 miles north-east of Aleywa (Moda), on a hill on the west bank of the Irrawaddy. It appears to be a very ancient structure, and is much broken down, and for many years was completely hidden by jungle growth. The Myatheindan pagoda stands on the end of the Gangaw range above the Irrawaddy at Tigyaing. The remains of the old wall erected by the Chinese when they invaded this part of the country are still to be seen at Tigyaing.

Population.

The population of Kathā in 1891 was 90,548 (not including the Wuntho State, annexed in that year), and in 1901 amounted to 176,223. Its distribution in the latter year is shown in the table on the next page.

There are no towns of importance, and very few large villages. The last few years have seen a rapid increase of population in the country lying along the railway; but it has not extended to the riverain portions of the District, where, it is said, development has been arrested by the cost of transit. Immigration has taken place largely from Shwebo, and

to a lesser extent from Mandalay District. Rather more than 95 per cent. of the people are Buddhists. Burmese is the language of about 123,000. Kadu is spoken in the west, and Shan and Kachin in the north.

Township.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Kathā	1,152	1	178	20,062	18	+ 7	5,127
Tigyaing	352	...	116	16,046	46	...	4,448
Mawlu	1,344	...	281	17,178	13	+ 177	2,564
Indaw	416	...	151	14,208	34	+ 26	3,049
Wuntho	592	...	301	22,934	39		5,508
Kawlin	536	...	239	28,114	52	*	7,561
Pinlebu	1,367	...	362	29,321	21		4,593
Banmauk	1,235	...	338	28,360	23		3,431
District total	6,994	1	1,966	176,223	25	...	36,281

* The last four townships belonged in 1891 to the State of Wuntho.

Of the total population in 1901, Burmans numbered 82,800; Shans, 49,400; Kadus. 34,200; and Kachins, 5,900. The first named are settled over the greater part of the District; but while the Tigyaing and Wuntho townships are almost exclusively Burmese, there are comparatively few Burmans in the Banmauk and Mawlu townships. Broadly speaking, the Burmese element is strongest in the south, and grows weaker towards the north, where Shans, Kadus, and Kachins preponderate. The KADUS inhabit the western townships—Banmauk, Pinlebu, and Indaw; the Shans occupy the north, being most numerous in the Mawlu township, but they are well represented also in Kathā, Indaw, Pinlebu, and Banmauk, particularly in the last two. The Kachins are found in greatest numbers in the hills of Mawlu in the north of the District, and in the north of the Kathā township. In 1901 Musalmāns numbered 940 and Hindus 1,240; of these 450 Musalmāns and 180 Hindus lived in Kathā town. A large number of the Indian residents are Government or railway employés. The number of Christians in 1901 was only 153, mostly Europeans and Eurasians. Nearly half of them were residents of Kathā town. In 1901 about 77 per cent. of the population were engaged in or dependent on agriculture, about one-sixteenth of these being supported by *taungya* (shifting) cultivation alone.

Agriculture.

The District is composed mainly of hills, between which lie scattered patches of cultivated land, where the silt brought down by the streams from the hill-sides has been deposited so as to form a surface sufficiently level for rice cultivation. In the higher valleys the soil is, as a rule, very fertile, the most common

type being a rich grey loam known as *myema*. Another kind is a thick heavy clay, hard to work, and very liable to become waterlogged, a defect which is common more or less to all the soils of the District. In the lower valleys the ground is often similar to that described above, but in many cases it appears to have been formed of matter washed down from the lower slopes of the hills. These are as a rule composed of *indaing* or laterite, and the low land is therefore often very sandy and of poor quality. Plains of moderate extent stretch southwards from Wuntho to the boundary of Shwebo District, and from Mohnyin in a north-easterly direction to Myitkyinā. *Taungya*-cutting is practised in parts, but there is little or no permanent *ya* (high land) cultivation. The *taungya*-cutters are recognized as the poorest members of the agricultural community, and it is always their ambition to become possessed of ordinary plain rice land, though they seem somewhat reluctant to migrate in search of it.

The land tenures prevailing are of considerable interest. Officers have from time to time been placed on special duty in connexion with this question, but a comprehensive inquiry has only recently been made by the Settlement officer. From his report it appears that the southern part of the District includes small portions of the old Pyinsala-nga-myo and Myedu *wun*-ships. In these tracts the tenures are similar to those prevailing in other parts of Upper Burma. In the rest of the District the tenures are found to have been of a communal nature. Land within a village or *thugyi*-ship could be held only by a resident, and sales or mortgages, where permitted at all, were allowed only to another resident. If a landholder removed to another village he forfeited his land, though in some cases he was entitled to recover it on his return. This system was enforced most stringently in the old Wuntho State, where no mortgages or sales were permitted, and where the *thugyi*, as head of the commune, allotted available lands to residents, and might in certain cases redistribute land already occupied or subdivide an existing holding to provide land for a new-comer. In what is known as the *Shwe* country, and elsewhere in the District, the power of the *thugyi* was more restricted.

The principal agricultural statistics for 1903-4 are given in the table on the next page, the areas being in square miles.

Of the total cultivated area, rice covered 223 square miles, and sesamum 3,300 acres. Tea and tobacco are grown, but only to a small extent. The former is produced on the hills in the Banmauk township in the north-west of the District. The area under garden cultivation was only 800 acres, composed mostly of plantain groves.

Cultivation is extending gradually and normally, and in several areas it is still susceptible of considerable expansion. Its growth is most marked in the plains around Mohnyin. This part of the country,

which was ravaged by the Kachins in 1883, is now being rapidly repopulated, and much of the old cultivated land is being cleared afresh. There is little indebtedness among the local husbandmen. The ancient systems of land tenure are still maintained, and these being of a communal or quasi-communal character strictly forbid the alienation of land to persons living outside the community. Government advances for agricultural purposes have been freely made since 1888-9. The amount advanced in 1903-4 was Rs. 18,000. No difficulty has been experienced in the recovery of the loans.

Township.	Total area.	Cultivated.	Irrigated.	Forests.
Kathā	1,152	11	5	4,000
Tigyaing	352	16	7	
Mawlu	1,344	18	...	
Indaw	416	18	8	
Wuntho	592	41	23	
Kawlin	536	70	...	
Pinlebu	1,367	35	...	
Banmauk	1,235	23	4	
Total	6,994	232	47	4,000

There are no special breeds of domestic animals. Buffaloes are more generally used than kine, and those suitable for timber-dragging fetch the highest prices. Ponies are imported principally from the Shan States through Bhamo, and are generally small-sized. Generally speaking, goats are kept only by natives of India.

A good deal of the rice land is irrigated in some way or other, as the conformation of the country lends itself to such processes. To secure the required water, the many hill streams and rainy season drainage channels are dammed, and their contents diverted on to the fields. Most of the dams, however, supply only small areas, sometimes only a single holding. The most important irrigation scheme is at Wuntho, where two weirs on the Daungyu water a considerable area, dowered with a fertile soil and productive of good crops. A fairly extensive area also is irrigated in the neighbourhood of the Indaw Lake. On the Meza the water-wheel known as the *yit* is used to lift water on to the fields. The total area returned as irrigated in 1903-4 was 47 square miles. The most important inland fishery is in the Indaw Lake. Fishing is carried on in sections of the Irrawaddy and the Meza, known as the Myityo fisheries, and in the swamps adjoining the former river. The fishery revenue in 1903-4 amounted to Rs. 70,000.

The District comprises the greater part of the Kathā Forest division, as well as portions of the Mu and Upper Chindwin divisions. The Kathā division lies close to the Irrawaddy, and includes the area drained by the Meza river. The Mu division comprises as much of

the District as is drained by the Mu river and its tributary the Daungyu. A portion of the Banmauk township falls within the drainage area of the Chindwin, and is included in the Upper Chindwin Forest division. The total forest area exceeds 4,000 square miles in extent, and includes 1,119 square miles of 'reserved' forests. Reservation is not yet complete, but some areas have already been notified, and others will probably be proposed shortly. Teak is the predominant species of timber tree; in fact, in many places it may be said to grow almost like a weed. *Padauk* (*Pterocarpus sp.*) and *pyingado* (*Xylia dolabriformis*) are found in the south of the District, where the climate is drier. Considerable quantities of 'unreserved' woods are extracted, principally from unclassed forests; of these the most important are *in* (*Dipterocarpus tuberculatus*), *ingyin* (*Pentacme siamensis*), *kanyinbyu* (*Dipterocarpus alatus*), and *yamane* (*Gmelina arborea*). Bamboos and canes are also obtained in large quantities. The minor forest produce consists of *shaw* (*Sterculia sp.*), *indwe*, and *pwenyet*. A little cutch is extracted in the south, and small quantities of lac are found near Banmauk.

Forests.

Owing to the accessibility of the Irrawaddy and Meza forests, most of the valuable teak was extracted from them before annexation. Large trees are now scarce in these areas, and where found prove difficult of extraction. and in many of the Reserves the growing stock consists mainly of coppice or stool shoots springing from the old stumps. There are some teak *taungya* plantations and a little experimental cultivation of rubber in the Mohnyin Reserve.

The total forest receipts in 1903-4 amounted to about $4\frac{3}{4}$ lakhs. It is impossible to give exact figures of either the revenue or the area of unclassed forests, in consequence of the fact that the District boundaries and those of forest divisions do not coincide.

Gold, copper, iron, and lead are found. A gold-mine was worked for some years at Kyaukpazat by an English company, but the reef has been worked out and the mine is now closed. The company had a capital of Rs. 12,000, and used the cyanide process, with a crushing plant of ten stamps. Gold-washing is still carried on locally in the beds of streams in many parts of the Wunthe subdivision, and in some places in Banmauk. Little is known as to the return obtained, but it appears to be very small. This part of the country was formerly known as the *Shwe* ('golden') country, three divisions of which were recognized: the Shwe Ashe Gyaung, the Shwe Ale Gyaung, and the Shwe Anauk Gyaung, the two first being within Kathā District. They were not continuous tracts, but included many scattered villages where revenue used to be paid in gold, and whose *thugyis* were called *shwehmus*. Iron is found in small particles in the beds of streams at Thanthonda, Gananma,

Minerals.

Gananbwa, and Taman in the Wuntho subdivision, but there is little or no trade in local iron now. Lead occurs at Mawka, Mawhaing, and Mawkwin, and used to be dug out of pits from 20 to 60 feet deep, which are, however, not worked at present. Copper is found at Sigadaung and, like lead, was at one time extracted, but the mines have been closed for many years. Jade occurs at Mawlu, and soapstone of inferior quality in the Kathā township. A small quantity of salt is produced, principally from brine-wells in the Mawlu and Pinlebu townships.

Trade and communications.

Kathā possesses no arts or manufactures. The greater part of the population are dependent on agriculture, supplementing their earnings by other kinds of manual labour in the dry season. From Pinlebu and Banmauk a considerable number of persons go every year to work at the jade-mines. After agriculture the extraction of timber is the most important industry. Three European firms are at present engaged in the timber business in different parts of the District, in addition to a number of minor contractors. A steam saw-mill at Kalon, on the west bank of the Irrawaddy, 22 miles south of Kathā town, employs about twenty-two persons. The only other industrial enterprise which employed steam-power was the Kyaukpazat gold-mine, now closed. Pickled tea of two kinds, known respectively as *paungthi* and *pyaokthi*, is made in the west; gold-washing and salt-boiling are both practised on a small scale; and the manufacture of cart-wheels and the making of sandals and straw hats are other minor industries.

Timber, bamboos, cane and other minor forest produce, and paddy are the principal exports. The trade in timber consists of teak, *in*, and *ingyin*, and a few other 'unreserved' woods, which are rafted down the Kaukkwe, Meza, and Shweli streams into the Irrawaddy, and go by this route to Mandalay, the railway being utilized occasionally from Kadu, about 5 miles along the line south-west of Mohnyin. Considerable quantities of paddy are exported by Burmese brokers by rail and river, principally to Mandalay, for milling. The collecting centres on the railway are Wuntho, Kawlin, and Mohnyin, which are within easy reach of the large rice-growing areas: namely, Tigyaing on the Irrawaddy and Kywegawgyi on the Meza. Timber in rafts and paddy in boats are also sent down the Mu from Pinlebu; and a fair amount of cured and dried fish from the riverain villages leaves Kathā by rail for Mogaung and the jade-mines, and by road for the west of the District and the Upper Chindwin. A small trade in pickled tea is carried on in the Wuntho subdivision, where it is grown and manufactured. The main imports are hardware for agricultural implements and house-building purposes, cotton twist and yarn, cotton piece-goods, silk and cotton waistcloths and handkerchiefs of both European

and Burmese manufacture, Japanese umbrellas, crockery and plated ware, jaggery, *til* or gingelly and kerosene oil, and salt of both European and Shwebo manufacture.

The Sagaing-Myitkyinā railway cuts through the District in a north-easterly direction for 115 miles, traversing the most important rice-growing tracts, with stations at Kawlin, Wuntho, Indaw, Mawlu, Mohnyin, and other places. A branch line, 15 miles long, runs from Nabā south-eastwards to Kathā, connecting the main line with the Irrawaddy.

In the eastern part of the District the Irrawaddy forms the chief means of communication. The Irrawaddy Flotilla Company runs regular services of mail and cargo steamers up and down the river, and a daily ferry steamer between Kathā and Bhamo connects with the railway at Kathā.

The Public Works department maintains 185 miles of road, mostly unmetalled. The principal tracks are: Indaw to Mansi, passing through Banmauk, 61 miles, unmetalled; Wuntho to Pinlebu, 41 miles, unmetalled; Kawlin to Tawma, 30 miles, metalled in places only; Wuntho to Singon, 17 miles, and Wuntho to Taungmaw, 11 miles, metalled in places only. The District fund, which is small, maintains only one unmetalled road, from Tigyaing to Manle.

Administration.

For purposes of administration the District is divided into three subdivisions: Kathā, comprising the townships of KATHĀ, TIGYAING, MAWLU, and INDAW; Wuntho, comprising the townships of WUNTHO, KAWLIN, and PINLEBU; and the subdivision and township of BANMAUK. Subordinate to the township officers are 530 village headmen. In addition to the subdivisional and township officers, the Deputy Commissioner is assisted by a treasury officer, who is also sub-registrar, an *akunwun* (in subordinate charge of the revenue administration), and a superintendent of land records, who has under him 5 inspectors and 34 surveyors. The Public Works department is represented by an Assistant Engineer under the Executive Engineer in charge of the Myitkyinā division.

The Deputy-Commissioner, subdivisional officers, and township officers preside over the District, subdivisional, and township courts. Under the Kachin Hill Tribes Regulation, 1895, which is in force in the hill tracts of the District, the District Magistrate is Sessions Judge. Crime generally is infrequent and no class of offence is exceptionally common. In the Kachin Hills, however, a good deal of opium smuggling takes place, which is difficult to check, and a few large seizures of opium brought in from China through Bhamo have been made in recent years. The opium habit is prevalent in most parts of the District, as is frequently the case in malarious tracts.

The revenue system is at present at a stage of transition. On culti-

vated land which has been surveyed, land revenue is for the present assessed at rates varying from 4 annas to Rs. 1–8–0 per acre, the average assessment being about 10 annas. On unsurveyed land, revenue is assessed at one-eighth of the gross produce, commuted at rates which are fixed annually. The incidence of this form of taxation is slightly heavier than that by acre rates. In the surveyed portions the average size of a holding is a little over 4 acres. A special survey is now being made which will include most of the unsurveyed but cultivated land. The settlement is in progress, and the operations have by now reached an advanced stage.

The following table shows, in thousands of rupees, the fluctuations in the revenue since 1891–2, the first year for which statistics for the District as now constituted are available:—

	1891–2.	1900–1.	1903–4.
Land revenue . . .	66	1,73	1,69
Total revenue . . .	4,86	6,28	6,48

Thathameda brought in Rs. 3,65,000 in 1903–4, and till the settlement rates have been introduced will continue to be the main source of revenue.

The District fund, administered by the Deputy-Commissioner for the upkeep of roads, *dāk*-bungalows, &c., had an income of Rs. 15,700 in 1903–4, the chief item of expenditure being public works (Rs. 5,400). No municipalities have been constituted.

The civil police force is in charge of a District Superintendent, and is divided into three subdivisional charges corresponding with the civil administrative subdivisions, Kathā, Wuntho, and Banmauk. The first is an Assistant District Superintendent's subdivision, the two latter are inspectors' charges. An inspector is also attached to the force at District head-quarters. There are 9 police stations and 9 outposts. The sanctioned strength of the force, excluding the superior officers, is 7 head constables, 23 sergeants, and 268 constables. This includes 2 Kachin police, who, while nominally attached to the police stations, actually live in the hills.

The military police are a detachment of the Shwebo battalion, under an assistant commandant, who has his head-quarters at Kathā town. The strength is 368 men, of whom 128 are stationed at Kathā, the remainder being distributed at the various township head-quarters.

The District jail at Kathā has accommodation for 87 prisoners. The principal industries carried on are grinding wheat for the military police, and carpentry and cane-work to supply the needs of the various Government offices. There is no public demand for jail-made articles, but the surplus produce of the jail garden is sold in the bazar.

The standard of education is, all things considered, fairly high. In 1901 about 40 per cent. of the males and 2 per cent. of the females enumerated were able to read and write, the proportion for both sexes being 21 per cent. Of the 309 schools in the District in 1904, 2 were secondary, 53 primary, and 254 elementary (private); and the total attendance was 4,142 pupils, of whom 224 were girls. All are purely vernacular schools, and none is entirely supported by Government or municipal funds. The expenditure on education in 1903–4 was Rs. 2,400, derived entirely from Provincial funds.

There are 2 civil hospitals, with accommodation for 42 in-patients. In 1903 the number of cases treated was 15,970, including 699 in-patients, and 227 operations were performed. The income was made up of Rs. 4,900 from Provincial funds and Rs. 850 from subscriptions. Out-patients are treated in 3 military police hospitals, the total for 1903 being 2,341. There are also 2 railway dispensaries. Quinine in pice packets is sold only by the post offices, sales through the agency of village headmen having been a failure.

Vaccination is not compulsory in any part of the District, and makes but little progress. In 1903–4 the number of persons vaccinated was only 2,315, or 13 per 1,000 of the population.

Kathā Subdivision.—Eastern subdivision of Kathā District, Upper Burma, containing the KATHĀ, TIGYAING, MAWLU, and INDAW townships.

Kathā Township.—North-eastern township of Kathā District, Upper Burma, lying on both sides of the Irrawaddy, between 23° 53′ and 24° 56′ N. and 96° 10′ and 96° 42′ E., with an area of 1,152 square miles. The population was 18,783 in 1891, and 20,062 in 1901, distributed in 178 villages and one town, KATHĀ (population, 2,931), the head-quarters. The greater portion of the township is covered with dense forests abounding in game. The inland villages obtain water for their rice lands from the network of small creeks covering the low-lying levels. The hilly parts to the north and west are inhabited by Kachins, who practise *taungya* cultivation. The cultivated area under supplementary survey in 1903–4 was 11 square miles, and the land revenue and *thathameda* amounted to Rs. 52,100.

Kathā Town.—Head-quarters of the District of the same name in Upper Burma, situated in 24° 10′ N. and 96° 21′ E., close to the edge of the hills on the right bank of the Irrawaddy; 70 miles below Bhamo, and nearly 200 above Mandalay. Population (1901), 2,931. The town is unimportant historically, and has only come into prominence since the advent of the British. It contains a bazar and the usual public buildings, and is laid out along five principal roads running north and south parallel with the river, covering an area about half a mile long

and a quarter broad. The houses in the native quarter are for the most part unpretentious. A branch line, taking off from the Sagaing-Myitkyinā railway at Nabā Junction (15 miles in length), terminates on the river bank close to the courthouse, giving easy access to the steam ferry to Bhamo and the boats of the Irrawaddy Flotilla Company plying between that station and Mandalay. The town contains a civil hospital with 23 beds, maintained by Provincial funds. Kathā is one of the District head-quarters in Burma which have not yet been constituted municipalities.

Kāthaun.—*Thakurāt* in the GWALIOR RESIDENCY, Central India.

Kāthgodām ('Timber dépôt').—Village in the Bhābar tract of Nainī Tāl District, United Provinces, situated in 29° 16′ N. and 79° 33′ E., at the terminus of the Rohilkhand and Kumaun Railway. Population (1901), 375. The place has only become of importance since the railway was extended from Haldwānī, the former terminus. It is now the starting-point for the ascent to the hill stations of Nainī Tāl, Rānīkhet, and Almorā. Kāthgodām is administered together with Rānībāgh, three miles away on the tonga road, under Act XX of 1856, the income being about Rs. 800. Rānībāgh (population, 624) is situated at the junction of the tonga road with bridle-paths to various places in the hills. It is an important stage in the trade route to the interior.

Kāthi.—Estate in Khāndesh District, Bombay. *See* MEHWĀS ESTATES.

Kāthiāwār (or Surāshtra).—The peninsula or western portion of the province of Gujarāt, Bombay, lying between 20° 41′ and 23° 8′ N. and 68° 56′ and 72° 20′ E. The extreme length of the peninsula is about 220 miles, its greatest breadth about 165 miles, its area about 23,445 square miles, and its population (1901) 2,645,805. Of these totals, about 1,245 square miles, with 173,436 persons, belong to the Gaikwār; about 1,298 square miles, with 128,559 persons, belong to Ahmadābād District; about 20 square miles, with 14,614 persons, belong to the Portuguese possession of Diu; while the remainder (area 20,882 square miles and population 2,329,196) is the territory forming the Political Agency subordinate to the Government of Bombay, established in 1822, having under its control 193 separate States, great and small, whose chiefs divide among themselves the greater portion of the peninsula of Kāthiāwār.

The Kāthiāwār Agency is divided for administrative purposes into four *prānts* or divisions—JHĀLAWĀR, HĀLĀR, SORATH, and GOHELWĀR—and the States have since 1863 been arranged in seven classes. The first-class States number 8, second-class 6, third-class 8, fourth-class 9, fifth-class 16, sixth-class 30, seventh-class 5, and the remaining 111 are combined into *thāna* circles

General Statistics for each State and Tāluka in Kāthiāwār

State.	Caste, tribe, or race of the ruling chief	Area in square miles.	Number of villages.	Population (1901).	Revenue (1903-4). From land	Revenue (1903-4). Total.	Tribute. Amount.	Tribute. To whom payable.
Gohelwār Prānt.					Rs	Rs.	Rs.	
*1 Bhaunagar . .	Gohel Rāwal Rājput.	2,860	666	412,664	25,00,861	39,53,602	1,54,500	British, Gaikwār, and Junāgarh.
2 Pālitāna . . .	Gohel Rājput	290	91	52,856	5,11,177	6,40,911	10,364	Gaikwār and Junāgarh.
3 Jasdan . .	Kāthi . . .	283	56	25,727	1,14,715	1,22,921	10,661	British and Gaikwār.
3 Vala	Gohel Rāwal Rājput.	105	40	13,285	2,10,000	2,25,000	9,202	Gaikwār and Junāgarh.
4 Lāthi . . .	"	42	9	8,831	1,21,957	1,37,511	1,857	"
6 Bhadli . . .	Kāthi . . .	. .	16	2,988	12,000	15,000	1,357	British and Junāgarh.
6 Itaria	"	. .	2	506	2,800	3,000	355	
6 Kotra Pitha .	"	. .	13	6,772	44,500	70,000	5,578	"
6 Vānkia . .	"	. .	3	947	4,745	5,051	544	"
7 Kariāna . . .	"	. .	9	2,265	16,000	20,000	1,157	"
Akadia . . .	Chāvada Rājput.	. .	1	102	1,025	1,025	154	
Alampur . . .	Gohel Rājput	. .	1	497	4,000	4,500	1,397	Gaikwār and Junāgarh.
Bābra	Kāthi . . .	. .	6	7,417	48,921	69,683	—	—
Bhandāria . .	Kāmalia Ahīr	. .	1	449	3,750	4,000	322	Gaikwār and Junāgarh.
Bhojavadar . .	Gohel Rājput	. .	1	764	5,000	5,300	550	"
Bildi	Sindi . . .	. .	1	388	351	719	—	—
Bodā-no-nes .	Kāmalia Ahīr	. .	1	136	1,000	1,200	112	Gaikwār and Junāgarh.
Chamārdi . .	Gohel Rājput	. .	2	2,168	9,000	10,000	858	"
Chiroda . . .	Sarvaiya Rājput.	. .	1	247	2,250	2,500	135	"
Chitrāvāv . .	Gohel Rājput	. .	1	246	2,000	2,200	529	"
Chok	Sarvaiya Rājput.	. .	2	1,215	6,500	6,800	417	"
Dātha . . .	"	69	24	9,452	25,539	31,539	5,398	"
Dedarda . . .	"	. .	1	783	4,200	4,500	103	Gaikwār.
Derdi-Janbai .	Chāran . .	. .	1	492	4,336	4,370	—	—
Dhola	Gohel Rājput	. .	1	201	1,800	1,300	384	Gaikwār and Junāgarh.
Gadhāli . . .	"	. .	4	1,537	9,000	10,000	1,000	"
Gadhoola . .	"	. .	1	366	2,800	3,000	196	"
Gundhol . .	"	. .	1	137	1,800	2,000	111	"
Iavri	Sarvaiya Rājput	. .	2	979	5,000	5,200	290	"
Jālia Amarāji .	"	. .	1	444	2,300	2,500	136	"
Jālia Mānaji .	"	. .	1	256	2,000	2,200	31	Gaikwār.
Junā Pādar . .	Khasia Kolī .	. .	1	143	870	900	50	Gaikwār and Junāgarh.
Kamadhia . .	Mīr Muhammadan	. .	1	496	4,079	5,671	377	British.
Kanjarda . .	Sarvaiya Rājput.	. .	1	313	1,500	1,600	128	Gaikwār.
Katodia . . .	Gohel Rājput	. .	1	347	2,200	3,000	221	Gaikwār and Junāgarh.
Khijadia . . .	Saiyid Muhammadan.	. .	1	391	3,000	3,100	—	—
Khijadia Dosāji	Gohel Rājput	. .	1	361	2,500	2,600	427	Gaikwār and Junāgarh.
Limbda . . .	"	. .	4	2,194	26,000	28,000	1,21[illegible]	"
Morchopna . .	Kāmalia Ahīr	. .	1	375	1,500	1,750	163	"
Nilvala . . .	Kāthi . . .	. .	1	457	3,083	3,735	665	British and Junāgarh.
Pachhegām .	Gohel Rājput	. .	3	3,655	23,800	25,000	2,802	Gaikwār and Junāgarh

* This and other numbers in the first column denote the class of the chiefs.

State.	Caste, tribe, or race of the ruling chief.	Area in square miles.	Number of villages.	Population (1901).	Revenue (1903-4). From land.	Revenue (1903-4). Total.	Tribute. Amount.	Tribute. To whom payable.
Gohelwār Prānt—contd.					Rs.	Rs.	Rs.	
Pah	Sarvaiya Rājput.	. .	1	273	2,500	2,600	317	Gaikwār and Junāgarh.
Pānchāvada .	"	. .	1	287	1,500	1,700	241	"
Rājpara . . .	"	. .	1	552	2,000	2,150	274	"
Rāmanka . .	Gohel Rājput	. .	1	470	3,000	3,200	672	"
Rāndhia . . .	Saiyid Muhammadan.	. .	1	693	6,779	6,779	—	—
Rānīgām . .	Sarvaiya Rājput and Kāthi.	. .	1	798	9,000	9,400	714	Gaikwār.
Ratanpur Dhāmanka.	Gohel Rāwal Rājput.	. .	2	651	4,200	4,200	903	Gaikwār and Junāgarh.
Rohisala . .	Sarvaiya Rājput.	. .	1	411	2,500	2,650	111	"
Samādhiala .	"	. .	1	617	5,000	5,200	518	"
Samādhiala (Chabhāria).	"	. .	2	1,273	6,500	7,000	2,280	"
Samādhiala (Chāran).	Gohel Rājput	. .	1	195	2,500	2,700	—	—
Sanāla . . .	Sarvaiya Rājput.	. .	1	416	3,000	3,200	322	Gaikwār and Junāgarh.
Sāta-no-nes . .	Kāmalia Ahīr	. .	1	240	1,000	1,200	109	"
Shevdivadar .	Khasia Kolī	. .	1	177	1,000	1,100	60	"
Songadh . . .	Gohel Rājput	. .	1	2,031	2,000	2,600	572	"
Toda Todi . .	"	. .	2	380	3,500	3,800	175	"
Vadāl	Kāmalia Ahīr	. .	1	320	2,750	3,000	154	Gaikwār.
Vadod . . .	Gohel Rājput	. .	1	814	3,000	3,200	1,102	Gaikwār and Junāgarh.
Vāngadhra . .	"	. .	1	582	2,200	2,400	104	"
Vāvdi Dharvāla	"	. .	4	2,007	10,500	11,000	1,530	"
Vāvdi Vachhāni	"	. .	3	490	3,000	3,300	334	"
Vija-no-nes . .	Khasia Kolī .	. .	1	193	700	750	3[illegible]	Gaikwār.
	Total	*4,210	1,[illegible]03	577,757	38,27,670	55,27,787	2,25,243	
Hālār Prānt.								
1 Gondal . . .	Jādeja Rājput	1,024	174	162,859	12,15,842	15,00,000	1,10,721	British and Junāgarh.
1 Morvi	"	822	141	87,496	4,43,250	7,10,044	61,559	British and Gaikwār.
1 Navānagar . .	"	3,791	669	336,779	19,00,719	24,84,210	1,20,093	British, Gaikwār, and Junāgarh.
2 Dhrol	"	283	68	21,906	62,622	1,07,175	10,231	Gaikwār and Junāgarh
2 Rājkot . . .	"	282	61	49,795	2,9[illegible],343	3,60,150	21,321	British and Junāgarh.
2 Wānkāner . .	Jhāla Rājput	415	102	27,383	1,80,054	2,18,925	18,879	"
4 Kotda Sāngāni	Jādeja Rājput	74	20	8,635	74,568	91,586	11,616	"
4 Mālia	"	103	17	9,075	69,874	1,55,994	1,367	Gaikwār and Junāgarh.
4 Vīrpur . . .	"	67	13	6,152	52,479	65,363	4,114	British and Junāgarh.
5 Gadhka . . .	"	23	5	1,636	8,720	12,633	845	"
5 Gavridad .	"	27	6	1,916	18,500	24,126	1,621	"
5 Jālia Devāni .	"	36	10	2,444	14,966	16,230	1,552	Gaikwār.
5 Kotharia . .	"	. .	6	2,150	22,712	25,930	1,246	British and Junāgarh.
5 Mengni . . .	"	35	8	3,354	25,465	29,847	3,41[illegible]	British.
5 Pāl	"	22	5	1,359	9,983	17,836	1,647	British and Junāgarh.
6 Bhādva . . .	"	. .	4	1,051	13,375	15,532	1,632	"
6 Rājpara . . .	"	. .	9	1,862	10,732	13,654	3,163	"
6 Shāhpur . . .	"	. .	4	1,156	6,948	15,233	610	"

* This is the actual area of the *prānt*. No details are available for small States.

State.	Caste, tribe, or race of the ruling chief.	Area in square miles.	Number of villages.	Population (1901).	Revenue (1903–4). From land.	Revenue (1903–4). Total.	Tribute. Amount.	Tribute. To whom payable.
Hālār Prānt—contd.					Rs.	Rs.	Rs.	
7 Khirasra . . .	Jādeja Rājput	.	11	3,117	11,000	15,432	2,716	British and Junāgarh
7 Lodhika . . .	"	. .	12	4,554	24,554	34,730	1,692	"
7 Vadāli . . .	"	.	1	409	5,109	6,435	324	"
Amrāpur . . .	Shaikh Muhammadan.	. .	2	1,240	8,000	8,000	511	British.
Bhalgām Baldhoi.	Kāthi . . .	.	1	617	8,471	9,168	262	British and Junāgarh.
Drāfa	Jādeja Rājput	.	24	8,456	50,000	70,000	4,871	"
Kanksiāli . .	"	. .	1	224	2,102	2,538	111	"
Kānpar Ishwaria.	Kāthi . . .	. .	2	1,365	15,457	16,135	347	"
Kotda Nāyani .	Jādeja Rājput	. .	1	1,000	9,313	11,005	687	Gaikwār and Junāgarh.
Mowa	"	. .	1	547	2,977	3,322	158	British and Junāgarh.
Mulila Deri .	"	. .	7	3,350	9,845	12,488	1,454	"
Satodad-Vāvdi	"	. .	4	2,790	9,000	12,500	1,927	"
Sisāng Chandli	"	. .	2	1,756	15,324	17,014	946	"
Virvao . .	"	. .	1	193	1,515	1,540	193	"
	Total	*7,477	1,394	755,532	45,94,619	60,84,835	3,91,828	
Jhālāwār Prānt.								
1 Dhrāngadhra .	Jhāla Rājput	1,156	134	70,880	2,99,308	4,43,761	44,077	British and Junāgarh
1 Limbdi . . .	"	344	47	31,287	1,76,409	2,02,264	45,534	"
2 Wadhwān . .	"	236	32	34,851	3,28,094	3,95,954	28,692	"
3 Chuda . . .	"	78	14	12,005	1,07,479	1,19,277	7,143	"
3 Lakhtar . . .	"	248	54	15,114	55,110	70,550	7,351	"
3 Sāyla	"	222	39	11,661	62,000	66,550	15,511	"
4 Bajāna . . .	Jāt Malek	183	27	10,279	46,326	71,135	7,933	"
4 Muli	Parmār Rājput.	133	20	15,136	51,263	60,000	9,351	"
4 Pātdi	Kunbi . . .	39	7	2,190	85,950	88,278	3,219	British
5 Vanod . . .	Jāt Malek .	57	13	3,911	26,832	30,921	1,953	British and Junāgarh.
6 Anandpur . .	Kāthi . . .	. .	34	5,061	29,652	31,902	920	"
6 Bhoika . . .	Jhāla Rājput	. .	3	3,012	19,500	20,000	2,132	British, Junāgarh, and Sukhdi.
6 Chotila . . .	Kāthi . . .	. .	32	6,635	36,313	41,750	898	British and Sukhdi.
6 Dasāda . . .	Malek . . .	120	22	10,941	1,85,331	2,08,354	12,991	"
6 Rai-Sankli . .	Kunbi . . .	. .	2	427	6,254	6,579	938	British and Gaikwār.
6 Rājpur . . .	Jhāla Rājput	. .	3	1,718	20,427	26,583	2,598	British and Junāgarh.
6 Sanosra . . .	Kāthi . . .	. .	3	667	4,153	1,065	237	British, Junāgarh, and Sukhdi.
6 Vadod . . .	Jhāla Rājput	.	3	1,264	12,356	14,356	1,537	British and Junāgarh.
Ankevalia .	"	.	3	1,497	19,500	21,000	1,526	"
Bāmanbore . .	Kāthi . . .	. .	4	847	4,015	4,279	76	British and Sukhdi.
Bhadvāna . .	"	. .	2	400	4,225	4,225	1,081	British and Junāgarh.
Bhālala . . .	"	. .	1	265	1,424	1,424	474	British
Bhalgāmda .	"	. .	3	1,588	7,000	8,000	1,505	British and Junāgarh.
Bharejda . .	"	. .	1	421	1,263	1,702	126	British and Sukhdi.
Bhathan . . .	Jhāla Rājput	. .	1	405	1,500	1,800	701	British and Junāgarh.
Bhamora . . .	Kāthi . . .	. .	11	1,204	10,241	10,555	371	"

* This is the actual area of the *prānt*. No details are available for small States.

State.	Caste, tribe, or race of the ruling chief.	Area in square miles.	Number of villages.	Population (1901).	Revenue (1903-4).		Tribute.	
					From land.	Total.	Amount.	To whom payable.
Jhālawār Prānt—contd.					Rs.	Rs.	Rs.	
Chachāna . .	Jhāla Rājput	. .	1	459	5,000	5,000	318	British.
Chhalāla . .	"	. .	1	557	4,517	5,017	1,122	British, Junāgarh, and Sukhdi.
Chobāri . . .	Kāthi . . .	. .	3	280	4,401	4,556	199	British and Sukhdi.
Darod . . .	Jhāla Rājput	. .	1	131	2,500	3,000	416	British and Junāgarh.
Devlia . . .	"	. .	2	494	2,240	2,240	523	"
Dudhrej . . .	"	. .	2	2,026	20,000	25,000	1,199	"
Gedi	"	. .	2	574	4,009	4,500	1,339	"
Gundiali . . .	"	. .	2	1,465	12,262	17,865	1,408	British.
Jākhan . . .	"	. .	1	441	2,300	2,500	208	British and Junāgarh.
Jamar . . .	"	. .	1	289	3,960	3,960	464	British.
Jhāmpodad . .	"	. .	1	451	3,200	3,400	138	"
Jhinjhūvāda including Rozva.	Kolī . . .	165	18	11,732	67,989	74,343	11,074	"
Kamālpur . .	Jhāla Rājput	. .	1	670	4,200	4,500	776	"
Kanthāria . .	"	. .	2	1,573	10,000	11,000	1,788	British, Junāgarh, and Sukhdi.
Karmad . . .	"	.	1	465	8,000	8,200	431	British and Sukhdi.
Kārol	"	. .	2	981	10,935	11,000	796	British and Junāgarh.
Kesria . . .	"	. .	1	146	1,900	1,900	278	British.
Khambhlāv . .	"	. .	2	852	1,400	1,500	869	British and Junāgarh.
Khāndia . . .	"	. .	1	627	4,000	4,000	900	British, Junāgarh, and Sukhdi.
Kherāli . . .	"	. .	2	1,638	24,600	25,880	678	British.
Laliyād . . .	"	. .	1	755	6,000	6,000	361	"
Mātra Timba .	Kāthi . . .	. .	1	352	2,591	2,727	362	British and Junāgarh.
Mevāsa . . .	"	. .	6	619	5,085	6,796	559	British and Sukhdi.
Munjpur . . .	Parmār Rājput	. .	1	456	10,000	10,000	603	British.
Palāli	Jhāla Rājput	. .	2	320	600	650	403	British and Junāgarh.
Pāliyad . . .	Kāthi . . .	. .	17	6,070	38,[illegible]55	43,699	1,[illegible]3	"
Rāmparda . .	"	. .	1	299	607	625	75	British and Sukhdi.
Sāhuka . . .	Jhāla Rājput	. .	1	801	9,000	9,200	584	British and Junāgarh.
Samla	"	. .	2	916	8,000	8,000	1,063	"
Sejakpur . . .	Kāthi . . .	. .	4	864	2,052	3,600	433	"
Sudamda-Dhandhalpur	"	. .	27	5,359	22,208	24,746	3,124	"
Talsāna . . .	Jhāla Rājput	. .	7	1,691	10,000	10,500	1,052	"
Tāvi	"	. .	1	500	2,000	3,000	335	"
Untdi	"	. .	1	240	1,100	2,000	539	"
Vana	"	. .	3	2,749	20,000	26,000	3,993	"
Vanāla . . .	"	. .	1	311	2,100	2,500	396	British.
Vithalgadh . .	Kāyasth Prabhu.	26	6	1,174	7,326	7,659	—	—
	Total	*3,978	641	293,883	19,27,044	23,59,580	2,39,376	
Sorath Prānt.								
1 Junāgarh .	Muhammadan	3,283	818	395,428	18,91,610	20,[illegible],753	65,604	British and Gaikwār.
1 Porbandar . .	Jethwa Rājput	636	97	82,640	2,94,168	9,74,734	48,504	British, Gaikwār, and Junāgarh.

* This is the actual area of the *prānt*. No details are available for small States.

State.	Caste, tribe, or race of the ruling chief.	Area in square miles.	Number of villages.	Population (1901).	Revenue (1903-4).		Tribute.	
					From land	Total.	Amount.	To whom payable.
Sorath Prānt—contd.					Rs.	Rs.	Rs.	
1 Jāfarābād . .	Habsi . .	42	12	12,097	22,905	61,800	—	—
3 Bāntva-Mānāvadar.	Bābi Muhammadan.	90	23	14,478	1,50,951	1,35,447	14,821	British.
5-7 Jetpur . . .	Kāthis . . .	721	148	107,049	7,94,509	9,29,683	59,223	British, Gaikwār, and Junāgarh.
5 Bāntva (Gidad).	Bābi Muhammadan.	132	33	24,374	1,65,674	2,28,178	14,820	British.
5 Dedan . . .	Kāthi-Babexia-Kotila.	50	12	4,394	30,950	59,405	4,181	Gaikwār and Unamamuli (1225)
5 Vasāvad . . .	Nāgar Brāhman.	17	4	5,137	12,000	18,000	766	British.
6 Bagasra . .	Kāthi . . .	. .	17	17,339	1,13,932	1,20,759	4,098	Gaikwār and Junāgarh.
6 Kuba	Nāgar Brāhman.	3	1	396	3,220	3,340	—	—
6 Vinchhāvad	"	4	1	414	4,000	4,100	—	—
Charkha . . .	Kāthi . . .	. .	2	1,519	25,000	27,000	541	Gaikwār and Junāgarh.
Dahida . . .	"	. .	3	915	13,000	13,500	—	—
Dholarva . .	"	. .	1	460	8,000	8,300	126	Gaikwār and Junāgarh.
Gadhia . . .	"	. .	2	528	4,200	4,500	295	"
Garmali Moti	"	. .	1	385	4,500	4,700	220	"
Garmali Nāni .	"	. .	1	340	2,300	2,400	194	Gaikwār.
Gigasāran . .	"	. .	1	582	6,500	6,600	—	—
Hālaria . . .	"	. .	4	1,268	12,000	12,500	179	Gaikwār and Junāgarh.
Jāmka . .	"	. .	1	101	9,000	15,000	185	Gaikwār.
Kaner . . .	"	. .	1	261	2,300	2,400	195	"
Kātrorota . .	"	. .	1	138	2,200	2,300	52	"
Khijadia Najani	"	. .	1	156	2,700	2,800	57	"
Lākhāpadar .	"	. .	1	544	2,[illegible]	3,000	178	Gaikwār and Junāgarh.
Mānāvāv . .		. .	1	405	4,000	4,100	172	"
Mouvel . .	"	.	3	1,957	18,000	18,200	313	Gaikwār.
Silana	"	.	1	774	5,000	6,250	102	"
Vāghvadi .	"	. .	1	109	1,400	1,450	154	Gaikwār and Junāgarh.
Vekaria . . .	"	. .	2	595	6,000	6,150	55	Gaikwār.
	Total	*5,277	1,19[illegible]	675,288	36,10,725	53,99,349	2,15,030	
Civil Stations and other villages.†	. .	. . .	11	26,736	. .	. . .	. .	
Grand Total	. . . . . .	‡20,882	4,242	2,329,196	1,19,60,058	1,[illegible]4,71,551	§10,71,482	

* This is the actual area of the *prānt*. No details are available for small States.

† The total number of villages and population according to the Census of 1901 are respectively 4,242 and 2,329,196: of the former, 11 (three civil stations and the rest villages of insignificant *talukdārs* who do not pay tribute) with an aggregate population of 26,736, have been omitted from the *prānt* totals. They are: Rasnal, Pipalva (Vithalgadh) (1,817), Ranparia (459), Hathasni (939), and Noghanvadar (113), in Gohilwar; Rājkot Civil Station (8,992), and Hadala (468), in Hālar; Wadhwān Civil Station (11,255), in Jhālawār; and Jetalsar Civil Station (463), Dhasa (1,473), and Shapur (763), in Sorath *prānt*.

‡ Separate figures for *tālukas* under *thāna* circles are not available. The areas of the whole *thāna* circles, in square miles, are—

Bābra . . 299	Chok . . . 104	Wadhwān *thāna* 197	Pāliyad . . 227
Songadh . . 82	Lodhika . . 265	Chotila . . 368	Lākhāpadar . 137
Chamārdi . . 72	Dhrāfa . . 208	Bhoika . . 179	Bagasra . . 69

§ The total amount of tribute of all kinds is Rs. 10,79,371, according to Aitchison's *Treaties*. To this sum Rs. 1,225 on account of Unamamuli paid by Dedan has been added; while Rs. 9,114, the amount of tribute and *zortalbi* paid by the Amreli *mahāl* of the Gaikwār, has been omitted.

Formerly Kāthiāwār was divided into ten *prānts*: namely, Jhālawār in the north; Machhukāntha, west of Jhālawār; Hālār, in the north-west; Okhāmandal, in the extreme west, belonging to Baroda; Bardā or Jethwār, along the south-west coast; Sorath, in the south; Babriāwār, a hilly tract in the south-east; Kāthiāwār, a large district near the middle; Undsarviya, situated along the Shetrunji river; and Gohelwār in the east, along the shore of the Gulf of Cambay, so named from the Gohel Rājputs who are the ruling race in it. In this last-named division is situated the Gogha *mahāl* of Ahmadābād District.

Physical aspects.

A square peninsula, standing boldly out into the Arabian Sea between the smaller projection of Cutch and the straight line of the Gujarāt coast, its physical features suggest that it may once have been an island or a group of islands of volcanic origin. Along its northern border stretch the shallow waters or the salt-encrusted surface of the Rann. On the east, between Kāthiāwār and the mainland, a belt of salt lands and the long lagoon of the Nal mark the line of the depression, which, unless the evidence of travellers is unusually at fault, formed until recent times during the rains a connecting link between the Gulf of Cambay and the Little Rann.

Three travellers of authority, all of whom visited Cambay, speak of Kāthiāwār as an island. The first of these, Varthema, 1503–8 (Badger's edition, p. 105), says that the city of Cambay lies 3 miles inland close to the mouth of the Indus. Baldaeus, 1672 (*Churchill's Voyages*, vol. iii, p. 566), states that Cambay stands on one of the largest channels of the Indus; Alexander Hamilton, 1690–1721 (*New Account*, vol. i, p. 131), states that one of the largest branches of the Indus running into the sea at Cambay makes Gujarāt an island. Still more difficult to consider a mistake is Captain MacMurdo's statement in 1813 (*Journal, Royal Asiatic Society*, vol. i, p. 41), that a tract similar to the Rann and known partially by the same name connects the Gulf of Cutch and Cambay, forming an island off the peninsula of Gujarāt for six months in the year. From the coast Kāthiāwār rises to a central table-land where all the rivers of the peninsula take their rise. The silt of the old eastern branch of the Indus and of the rivers Luni, Banās, Saraswatī, and Rupen, gradually filling the sea-bed, with some help possibly from the great upheaval of 1820, has joined north-east Kāthiāwār with the mainland of Gujarāt.

Kāthiāwār was known to the Greeks and Romans under the name of Σαυραστρήνη; the Muhammadans called it by the prākritized name of Sorath, and to this day a large division in the south-west, 100 miles in length, retains that title. Another tract, quite as large, to the east of the centre, however, has long been known as Kāthiāwār, from having been overrun by the Kāthis, who entered the peninsula from Cutch in the thirteenth and fourteenth centuries. In the fifteenth century the

whole tribe was driven out of Cutch, and in that and the following century conquered a considerable territory. The Marāthās who came into contact with them in their forays, and were sometimes successfully repelled by them, extended the name of Kāthiāwār to the whole province, and from them has been borrowed the appellation in its wider sense; but by Brāhmans and the natives generally it is still spoken of as Surāshtra.

The surface of Kāthiāwār is for the most part undulating, with low ranges of hills running in very irregular directions. With the exception of the Thāngā and Māndav hills, in the west of Jhālawār, and some unimportant hills in Hālār, the northern portion of the country is flat; but in the south, from the neighbourhood of Gogha, the Gīr range runs nearly parallel with the coast, and at a distance of about 20 miles from it, along the north of Babriāwār and Sorath to the neighbourhood of Girnār. Opposite this latter mountain is the solitary Osam hill, and still farther west is the Bardā group, between Hālār and Bardā, running about 20 miles north and south from Ghumli to Rānāwāo. The Girnār clump of mountains is an important granitic mass, the highest peak of which rises to 3,500 feet above the sea.

The principal river is the Bhādar, which rises in the Māndav hills and, flowing south-west, falls into the sea at Navibandar, in Bardā, after a course of about 110 miles, everywhere marked by highly cultivated lands bordering its course. From the same hills rises another Bhādar, known as the Sukha Bhādar, flowing eastward into the Gulf of Cambay. Other rivers are the Aji, Machhu, Bhogāva, and Shetrunji, the latter remarkable for wild and romantic scenery.

Of salt-water creeks the most important are Hansthal, connecting the outer and inner Gulf of Cutch; Bhaunagar, forming the channel between that town and the Gulf of Cambay; the Sundrai, 8 miles north of Bhaunagar; the Bavliali, 2 miles north of the Sundrai creek; and the Dholera, leading from the Gulf of Cambay 10 miles inland to the town of Dholera.

Notwithstanding its extent of coast, Kāthiāwār has no really good harbour except Beyt, at the north-east corner of Okhāmandal. The principal ports are Vavānia, Jodiya, Bedi, and Salāya in the Gulf of Cutch; Dholera, Bhaunagar, and Gogha in the Gulf of Cambay; and Mahuva, Jāfarābād, Diu, Verāval, Māngrol, Navibandar, and Porbandar on the south and west coasts. Of these, Vavānia, Jodiya, Bedi, Salāya, Navibandar, Mahuva, Bhaunagar, and Dholera are on creeks, and communication with them depends on the tide; while the rest are little better than open roadsteads.

The chief islands are Piram in the Gulf of Cambay; Chānch, Shiāl, and Diu off the south coast; Beyt in the west; and the Chānka islets in the Gulf of Cutch.

The peninsula contains few lakes larger than village reservoirs. The most remarkable are the Nal at the head of the Rann of Cambay, and the Gheds on the south-west coast near Mādhavpur.

With the help of the Nal, two *ranns* or salt wastes nearly encircle the east and north-east of Kāthiāwār, the little CUTCH RANN and the Rann of Cambay stretching about 35 miles north from the mouth of the Sābarmatī. From the head of the Gulf of Cutch, at the mouth of the Hansthal creek, the Little Rann, covering an area of about 1,600 square miles, stretches north-east for about 60 miles, varying from 5 to 30 miles in breadth, and connecting with the Great Rann. In the south-west corner are the KHĀRĀGHODA salt-works.

The Rann of Cambay, a long, shallow, rocky channel or dry estuary, extends north-west about 35 miles from near the mouth of the Sābarmatī at the upper end of the Gulf of Cambay. The lower part is rich in marine silt, and joins the Nal during the south-west monsoon, forming a connected sheet of water which spreads over the neighbouring tracts of the Bhāl and the Nalkāntha, turning the villages into islands and cutting off communication with Ahmadābād. The upper end of the Rann is now crossed by the railway between Viramgām and Wadhwān.

Basalt beds belonging to the Deccan trap formation occupy the greater portion of the peninsula of Kāthiāwār. They lie almost horizontally, and have been deeply denuded, so that countless numbers of intrusive dikes, filling the fissures through which the molten material was injected, have become visible in every district. These dikes are remarkable for their columnar structure, consisting of huge hexagonal prisms loosely stacked upon one another and arranged horizontally. They exert a pronounced influence upon the underground drainage, a circumstance well-known to the agriculturists, who persistently sink their irrigation wells along the dikes, tracing out their course with great assiduity, and are almost invariably rewarded by the presence of water at a depth of 15 to 20 feet. In some instances apparently the joints and cracks in the dike rock communicate with some deep-seated water-bed; in other cases the dikes seem to wall up and keep in on one side the water of the adjoining strata. The Girnār mountains, and probably the Bardā hills north-east of Porbandar, appear to be great intrusive masses of the same age as the basalt flows and columnar dikes; they may represent the inner cores of great volcanoes now denuded of the volcanic ejectamenta that formerly covered them. The rocks of Girnār contain the somewhat uncommon mineral alaeolite, and some of them belong to the exceptional class of rocks known as monchiquites. The basaltic formation has a very low dip from north to south, perhaps original, in consequence of which some of the older underlying rocks in the northern part of the peninsula, and some of the newer superincumbent strata, are exposed. The older rocks in the northern part

belong to two different series: the Umia beds, which are of neocomian, that is, of the Lower Cretaceous age; and the Lameta beds, which are Upper Cretaceous (cenomanian). The Umia beds (which take their name from a village in Cutch) are principally exposed about Dhrāngadhra and farther south-west. They consist chiefly of sandstone, open, imperfectly cemented, and unevenly stratified, with coarse and gritty, or even conglomeratic runs and layers. There are, however, some thick beds of fine texture among them, and a few subordinate bands of shale. The Lameta beds occur principally round Wadhwān, where they are locally known as the Wadhwān sandstones. Beds newer than the basalts and overlying them run along the southern seaboard of the peninsula from Dwārka on the west to Bhaunagar on the east. They include sandstones and pure limestones with marine fossils identical with those of the Gaj group in Sind, overlaid by sandstones and conglomerates of fluviatile origin corresponding in age with the Siwālik. These fluviatile beds contain an older series, sometimes with abundant remains of terrestrial animals, as for instance in the island of Piram, corresponding with the Lower or Middle Siwāliks; and a newer series known as the Dwārka beds, corresponding with the Upper Siwāliks. Laterite sometimes intervenes between the basalt and the overlying Tertiary beds.

A belt of recent alluvium follows the southern coast, and there are large alluvial areas in the eastern part of the peninsula near the Gulf of Cambay and in its northern part where the alluvium merges into the silt of the Little Rann. Raised beaches occur at some places along the sea-coast. The somewhat low rainfall allows to a certain extent the accumulation of wind-borne deposits; the finer particles of the sand on the sea-beach, consisting principally of the minute shells of foraminifera, are blown all over the land, where they accumulate to form the curious calcareous rock known as miliolite. In the immediate neighbourhood of the coast this wind formed miliolite merges into the raised beaches. The well-known 'Porbandar stone,' which is largely quarried and shipped to Bombay, is a variety of miliolite[1].

Except in the Gīr forest, Kāthiāwār is thinly wooded; and even there the timber is of little value. The mangrove abounds along the shores of the peninsula and is largely used as fuel. The coco-nut grows rapidly and bears steadily all along the south coast, and the wild date is met with in most parts of the peninsula. Excellent mangoes are grown in Mahuva from Bombay grafts.

[1] F. Fedden, *Memoirs, Geological Survey of India*, vol. xxi, pt. ii; J. W. Evans, *Quarterly Journal, Geological Society of London*, vol lvi (1900), pp. 559-83, and vol. lvii (1900), pp. 38-54. Descriptions of the fossil bones from the Island of Perim (Piram) have been published by H. Falconer in vol. i (1854) of the *Quarterly Journal, Geological Society of London*, and by R. Lydekker in Series X of the *Palaeontologia Indica*.

The principal wild animals include the lion (found in the Gīr range), leopard, hunting cheetah, antelope, hog, hyena, wolf, jackal, wild cat, fox, porcupine, and smaller vermin. Of reptiles, the Indian python, the cobra, the whip-snake, and others abound, and the crocodile and land tortoise are common.

The lion was formerly common all over the Kāthiāwār peninsula, extending into Gujarāt and Central India. It is now found only in the Gīr forest, and rarely on the Girnār mountain. Its mane is shorter and its colour lighter than that of the African lion. Approximating in size to the tiger, it is somewhat heavier in bulk and stronger. It seeks the loneliest spot for its midday sleep, and when disturbed does not try to conceal its escape like the tiger, but walks boldly away. It used to avoid man more than either the tiger or leopard, and never lived near a village or hamlet; but since the last famine these habits have changed. Of a gregarious disposition, it moves in family parties, comprising occasionally three generations. Careful preservation of these lions has resulted in an appreciable increase of their number, which at present must be from 60 to 70. Since the last famine they have done considerable damage to cattle, and cases of attack upon men have also been reported from outlying villages.

The climate of Kāthiāwār is in general pleasant and healthy. January, February, and March are marked by heavy dews and thick fogs. The hot season, which is the healthiest period of the year, begins in April and lasts until the rain falls in June. The hot wind is most felt in the south. From September to the first part of November the climate is unhealthy for both Europeans and natives. A violent bilious attack, lasting for four or five days and followed by ague and fever, is the only special Kāthiāwār disease.

The heaviest rainfall in the peninsula occurs at Junāgarh (42 inches), in the Sorath *prānt*; at Rājkot, in the Hālār *prānt*, the average yearly fall is 30 inches; at Wadhwān, in Jhālawār, 21 inches. The monsoon begins in June and ends in October, the wettest months of the year being July to September.

During the last century Kāthiāwār suffered several times from earthquakes. On April 29, 1864, a shock occurred in many parts of the peninsula a little after 11 a.m. It was preceded by a low rumbling noise followed by a vibration for six seconds, causing widespread panic and excitement. On Nov. 27, 1881, at midnight a shock of earthquake was felt at Rājkot. In September and October, 1898, shocks of earthquake were felt in the northern districts, and in other years lesser shocks; but none of them caused any damage.

At a very early period Surāshtra was doubtless brought under the influence of Brāhmanical civilization, and, from its position on the coast, was most accessible to influences from the west. The edicts

of Asoka (265–231 B.C.) were inscribed by that monarch on a huge granite boulder between Junāgarh and Girnār. The Saraostos of Strabo is not improbably identical with Surashtra; and if so, the peninsula was included in the conquests of the Indo-Scythian kings (*circa* 190–144 B.C.). Its shores were well-known to the Alexandrian merchants of the first and second centuries, but there is considerable difficulty in identifying the places mentioned by them.

History.

Of the early history of the country we have but scanty notice. Mauryas, Greeks, and Kshatrapas probably held it in succession, and were followed for a brief space by the Guptas of Kanauj, who apparently governed by *senāpatis*. The later *senāpatis* became kings of Surāshtra, who placed their lieutenants at Vallabhi-nagar (identified with the buried city at Vala, 18 miles north-west of Bhaunagar). When the Gupta empire fell to pieces, the Vallabhi kings, whose dynasty was founded by Bhattāraka, a Gupta commander, extended their sway over Cutch and defeated the Meis, who appear to have gained considerable authority in Kāthiāwār between 470 and 520. It was in the reign of Dhurvasena II (632–40) that the Chinese pilgrim Hiuen Tsiang visited Va-la-pi (Vallabhi?) and Su-la-ch'a (Surāshtra), the inhabitants of which, he says, are indifferent and not given to learning, but profit by the proximity of the sea, and engage much in trade and barter. The people he described as numerous and wealthy, and he remarked many convents established for the benefit of recluses engaged in the contemplative piety of Buddhism.

How Vallabhi fell is not known, but possibly it was subverted by Muhammadan invaders from Sind. The seat of government was then moved farther north beyond the borders of Kāthiāwār, and remained at Anhilvāda from 746 to 1298, during which time various petty kingdoms arose, and the Jethwas became a powerful tribe in the west of Surāshtra. Anhilvāda was sacked by the Muhammadans in 1194, and finally conquered in 1298. The Jhālas are said to have been settled in Northern Kāthiāwār by the Anhilvāda kings. The Gohels (now in Eastern Kāthiāwār) came from the north in the thirteenth century, retreating before the tide of Muhammadan conquest, and were enabled by the decadence of Anhilvāda to conquer new seats for themselves. The Jadejas and the Kāthis came from the west, through Cutch. The sack of Somnāth, in Southern Kāthiawar, by Mahmud of Ghazni in 1026, and the capture of Anhilvāda in 1104, were the prelude to occasional Muhammadan invasions of Kāthiāwār. In 1324 Zafar Khān destroyed the temple of Somnāth. He was the first of the Muhammadan kings of Gujarāt, who reigned in prosperity from 1396 to 1535, and in decadence to the close of 1572, when Gujarāt was conquered by Akbar. The Ahmadābād kings, who held the tributary chiefs of

Kāthiāwār in subjection, carefully fostered commerce, and developed the ports of Māngrol, Verāval, Diu, Gogha, and Cambay.

About 1509 the coast was threatened by the Portuguese. Bahādur, defeated by Bābar's son Humāyūn, sought safety in Diu, and afterwards permitted the Portuguese adventurers to build a factory, which they turned into a fort, after having treacherously killed Bahādur (1537). The island and fort of Diu are still a Portuguese possession. Gujarāt, after its conquest by Akbar in 1572, was ruled by viceroys from the court of Delhi, until the Marāthās supplanted the imperial power. In 1705 the Marāthās entered Gujarāt, and by 1760 had firmly established their rule; but the following half-century was a time of little ease for the tributaries in Kāthiāwār, and petty wars were frequent. During the latter part of the eighteenth century, according to Musalmān and Marāthā custom, the Gaikwār, partly for himself and partly for his overlord the Peshwā, sent yearly a revenue-collecting army (*mulk-giri*) to collect contributions from the chiefs of Western and Northern Gujarāt. As this armed expedition caused much waste and confusion, the British Government agreed to associate itself with the Gaikwār in recovering the Marāthā tribute from the Kāthiāwār States.

In 1803 some of the weaker *tālukdārs* applied to the British Resident at Baroda for protection, offering to cede their territory to the Company. They were then independent of the Peshwā and the Gaikwār, with the exception of being bound to furnish contributions. In 1807 the forces of the Company and the Gaikwār advanced into Kāthiāwār, and the chiefs entered into engagements to pay a fixed tribute to their overlords, to keep the peace towards each other, and to maintain order within their own limits. In return, they were secured from the visitations of the *mulk-giri* force, which used to appear at harvest-time and in default of payment ravaged the crops and fired the villages. Internal warfare and resistance to the supreme authority were ended in 1807–8 by the settlement effected by Colonel Walker, one great feature of which was that the tributes were fixed, and the work of collection was undertaken by the British Government, which also acquired the Peshwā's rights in Kāthiāwār after the Sātāra proclamation in 1818. In 1820 the Gaikwār agreed to have his share collected and paid by the British Government.

Under the ruling houses there are numerous petty Rājput lairds and yeomen, representatives of old houses long ruined and supplanted, or of the younger brothers of chiefs who have received their *girās* or portions from the estate.

Kāthiāwār has many notable antiquities, which have been fully described by Dr. James Burgess[1]. Besides the famous inscription of Asoka already referred to, there are a number of rock-cut Buddhist

[1] *Archaeological Survey of Western India*, vols. ii and viii.

caves and temples at Junāgarh, mentioned by Hiuen Tsiang in the seventh century, and some fine Jain temples on Mount Girnār and the Shetrunja hills at Pālitana. At Ghumli, a former capital of the Jethwas, there are extensive ruins.

Population.

The Political Agency of Kāthiāwār has (1901) a population of 2,329,196. The population in 1872, 1881, and 1891 was 2,318,642, 2,343,899, and 2,752,404. During the last decade there was a decrease of 423,208, due to the famine of 1899–1901.

Natives of Kāthiāwār are largely represented in Bombay city, where 45,000 immigrants were enumerated at the recent Census A similar number were found in Ahmadābād city. The more adventurous Musalmān traders in the coast towns travel in considerable numbers to South Africa and Natal, and the seafaring population, once notorious for piracy, now furnishes numerous lascars to ocean-going steamers. The last detected case of piracy from Kāthiāwār occurred as recently as 1903. The distribution of the population among the numerous States of the Agency has been given above (pp. 165–9). They contain 52 towns and 4,163[1] villages, with an average density of 112 persons per square mile. The principal towns are BHAUNAGAR, NAVĀNAGAR, JUNĀGARH, RĀJKOT, DHORĀJI, PORBANDAR, GONDAL, MORVI, MAHUVA, VERĀVAL, and WADHWĀN. Hindus form 81 per cent. of the total, Musalmāns 14 per cent., and Jains 5 per cent.

The most interesting caste is the Rājput, numbering 113,000, and including the ruling families of the majority of the States. The Kāthis, from whom the peninsula derives its name, number 21,700. Among castes of 100,000 and over are Kunbīs (358,000), Kolīs (249,000), Brāhmans (158,000), traders, including Vānīs and Lohānas (135,000), and Dhers (116,000). Of the Brāhmans, more than half are of the Audich sub-caste (90,000). Modhs, Nāgars, and Srimālis are other subdivisions of this caste of local importance. The traders are mainly Lohānas (64,000). Ahīrs, an immigrant caste of shepherds who entered the peninsula at an early date and also spread southward to Khāndesh, number 74,000. Among Musalmāns, the most numerous sections are the Memons (68,000), who are traders; Khojas (29,000), also traders; and Ghānchis, or oil-men (24,000).

Of the total population, 41·6 per cent. depend on agriculture; commerce supports 5·6 per cent., industry 27·6 per cent., and various employments 25·2 per cent.

Agriculture.

Kāthiāwār has the essential features of a prosperous agricultural country. The climate is, on the whole, temperate, the rainfall moderate, streams abound, ponds and wells are fairly numerous, and there is much variety in the texture,

[1] Besides these there are 27 villages, which, being unpopulated at the time of the Census, were not returned.

quality, and depth of soil. On the other hand, the peninsula is thinly peopled; cultivators take up more land than they can till, and the style of farming is slovenly. The soil is of two main classes, black or red, the red being considered the less valuable. Of the first class is the deep black soil known as *kāmpāl*, suitable for the growth of cotton, while the better kinds of red soil favour the production of irrigated wheat and barley. A saltish earth, impregnated with clay and impervious to water, is not uncommon.

Some of the richest tracts lie along the course of the Bhādar river, and at Mahuva and Lilia, where excellent fruits and vegetables are grown. Sugar-cane is grown with success in the same locality. In Sorath, Chorwād is noted for its betel-vines. Gondal cotton is famous. In the northern and eastern districts of Jhālawār much cotton is grown. Hālār in the west yields excellent *jowār*, *bājra*, wheat, and other grains, and Sorath in the south is rich both in cotton and in grain. In Limbdi, and on the eastern coast of Kāthiāwār bordering the Gulf of Cambay, wheat, cotton, and grain are produced from a rich silt which requires no manure. Turmeric and *mūg* are common products.

The chief cultivating classes are: among Hindus, Kunbīs, Sathvāras, Rājputs, Ahīrs, Mers, and Kolīs; and among Musalmāns, Memons, Ghānchis, Bohrās, Sindīs, Jats, and Mianas. Of these the most expert are the Kunbīs.

During recent years considerable progress has been made in irrigation, by the construction of storage tanks wherever the natural features of the country render them possible. At least ten of these tanks with a systematic control of the water-supply have been constructed during the last ten years. Prominent among these are the Lālpuri tank at Rājkot, Alānsager at Jasadan, Paneli in Gondal, and Champa and Moldi tanks in the Chotila Thāna circle. The successive bad years have also been the cause of an increase in the number of wells for irrigation purposes.

The total cultivated area in 1903-4 was 8,074 square miles, distributed as follows: cotton (2,446), millet (2,008), *jowār* (1,866), wheat (406), gram (178), *mūg* (16), *udīd* (16), and 'others' (1,138).

The numerous petty courts and their people form a large body of rich resident landholders. spending their rents on their estates; and the ministers, officials, and landholders, of various stations and wealth, contribute to impart a brisk vitality to the progress and general well-being of the country. A large proportion of the public business of Kāthiāwār is conducted by, and at the cost of, native Darbārs. Bhaunagar has taken the lead in the material development of her resources, and was the first State in the Bombay Presidency to construct a railway at her own expense and risk.

Horses, formerly of excellent repute, are bred in large quantities.

The peninsula is suitable for the raising of stock, the central portion being famous as a breeding-ground. Most of the States maintain stud farms. In 1903-4 nine of the States maintained 56 stallions, which covered 791 mares. Milch cows and buffaloes are reared in the Gīr, camels in the Rann, and asses in Hālār and Jhālawār. The buffaloes of the Gīr, as also the cows, are famed as good milkers and are sold to dairymen in various parts of the Presidency, particularly in Bombay city. A good buffalo yields about 32 quarts of milk daily, and a good cow 12 quarts. Sheep are plentiful in some parts; their wool forming, together with cotton and grain, the chief article of export.

Forests.

Besides the Gīr with its 1,500 square miles of forest, there are important wooded tracts in Kāthiāwār. In Vānkāner and the Panchāl lands have been set aside for the growth of timber, and in Bhaunagar, Morvi, Gondal, and Mānāvadar *babūl* plantations have been formed. Palms, mangoes, and casuarina have been specially planted and cared for in Bhaunagar; trunk and feeder roads are being gradually planted with trees along their entire length; and several minor estates and villages are paying attention to forest conservancy.

Minerals.

Kāthiāwār abounds in minerals and is particularly rich in building stone. The principal metal is iron, which in former days was worked in Bardā and Khambhāliya districts. Near Porbandar a valuable description of building stone is extracted from the hills and sent to Bombay in large quantities. Pearls of good quality, but inferior in lustre to those of the Persian Gulf, are found in the Gulf of Cutch within Navānagar limits. A few are also found in Junāgarh and Bhaunagar near Bherai and Chānch. White coral of no market value is common. Red coral is sometimes found in small quantities at Māngrol and Sil. Bloodstone and agate are common near Tankāra in Morvi.

Trade and communications.

The Kāthiāwār region is a wealthy one. The land, though not of extraordinary richness, is generally of fair quality and is amply watered. The cotton exported supplies one-sixth of the total amount of cotton shipped from Bombay to foreign countries, and a large import of bullion and grain is yearly received by Kāthiāwār as part of the price. Cotton cloth, sugar, and molasses are largely imported. The total value of the sea-borne trade in 1903-4 was 378½ lakhs: exports 197 lakhs, and imports 181½ lakhs. The exports of cotton alone were more than 126 lakhs in value, and of wool 5½ lakhs. The imports of grain vary according to the season. Railways have absorbed a great portion of the export trade from the smaller ports on the coast-line, and concentrated it at Wadhwān in the north-east and Bhaunagar in the south-east, while

the import trade on the contrary is drawn towards the minor ports. Private enterprise has established three cotton-weaving mills and steam cotton-press factories, and there is a prosperous trade in timber. The chief handicrafts are gold and silver thread-making, weaving of silk and brocades, the making of red powders, of fragrant oils, of perfumed sticks and powder, of rose and other essences, inlaying ivory, and carving sandal-wood.

In the matter of roads, great progress has been made of late years. Where there was not a single mile of road in 1865, there are now more than 600 miles, for the most part bridged and metalled. Two great lines of trunk roads intersect the peninsula, one proceeding from Wadhwān to Junāgarh and Verāval, and the other from Bhaunagar to Jodiya, crossing at Rājkot, the head-quarters of the Agency. The Junāgarh line has a branch bifurcating at Jetpur towards Porbandar, while the Jodiya line has a similar branch going towards Navānagar. These main lines have various feeders to connect the capitals and other important towns of the numerous States.

Since 1880 communication has been improved by the introduction of railways, principally at the cost of Native States. The first entry of the railway into Kāthiāwār took place in 1872, under the auspices of the Bombay, Baroda, and Central India Railway Company. The terminus was at Wadhwān, and the length of the line within Kāthiāwār limits 39½ miles. A line constructed at a cost of 96 lakhs, shared by Bhaunagar and Gondal in the proportion of two-thirds and one-third, was opened in 1880. The total length of this line was 192 miles. In 1886 Junāgarh constructed at a cost of 37 lakhs a line 69 miles long, passing from Jetalsar through the capital to the port of Verāval. The Wadhwān-Morvi Railway was opened in 1887 and the extension to Rājkot completed in 1889. The Jetalsar-Rājkot Railway was opened in 1893.

The total length of railways in Kāthiāwār in 1904 was 577·09 miles, of different gauges, namely:—

Bhavnagar-Gondal-Junāgarh-Porbandar Railway	334·19
Jetalsar-Rājkot Railway	46·21
Jāmnagar Railway	54·22
Dhrāngadhra Railway	20·83
Rājputāna-Mālwā Railway	32·00
Morvi (metre-gauge) Railway	73·94
Morvi (2 feet 6 inches) Railway	15·70
Total	577·09

The conversion to the metre gauge from the standard gauge of the section between Viramgām to Wadhwān since December, 1902, has given the Rājputāna-Mālwa Railway access to Wadhwān junction, and Kāthiāwār thus possesses through connexion with the whole of Upper

India. The gross earnings of the (1) Bhavnagar-Gondal-Junāgarh-Porbandar, (2) Jetalsar-Rājkot, (3) Jāmnagar, and (4) Dhrāngadhra railways in 1904 amounted to 22·3 lakhs, and the working expenses to 10·5 lakhs. The gross earnings of the Morvi Railway amounted to nearly 3·5 lakhs, and the working expenses to 1·6 lakhs, representing a return of 7·71 per cent. on the capital cost.

Besides 248 British post offices, private internal postal arrangements are made by the State of Junāgarh. People from villages where there is no British post office or postal box send their letters through the State post, and are required to affix stamps issued by the State.

Famine.

The first famine of which records are available occurred in 1559. Since then the most notable famines have occurred in 1632, in 1719, in 1732, in 1747, and in 1791. The famine of 1877–9 was severe and widespread. In 1899–1902 the peninsula again suffered severely from famine. Relief measures were commenced in October, 1899, and closed in October, 1902. The highest number in receipt of relief exceeded 300,000 in May, 1900. More than 15 lakhs were spent on relief. The States contracted loans, partly from Government (65 lakhs) and partly in the open market (41 lakhs), amounting to 106 lakhs to meet the cost of this famine. Of this sum 36 lakhs was borrowed by Bhaunagar, 16 lakhs by Navānagar, and 7½ lakhs by Dhrāngadhra. The mortality was heavy, the Agency losing 15·37 per cent. of its population from this and other causes.

The year 1814–5 was called the 'rat year,' from the famine produced by the ravages of these animals. Captain Le Grand Jacob remarked of this pest:—

> 'They appear suddenly in dense masses past all counting, as if springing from the earth, about the harvest season. Nothing can stop them . . . fires, ditches, have been tried in vain; they move along, a mighty host, eating up all that comes in their way. All at once they vanish as if by magic, and for years not one is to be seen; they are about double the size of a common rat, and are of a reddish sandy colour.'

A similar swarm took place after the recent famine.

Administration.

Since 1822 political authority in Kāthiāwār has been vested in the Political Agent subordinate to the Government of Bombay. In 1903 the designations of the Political Agent and his Assistants were changed to those of Agent to the Governor and Political Agents of the *prānts*.

Before 1863, except for the criminal court of the Agent to the Governor, established in 1831, to aid the Darbārs of the several States in the trial of heinous crimes, interference with the judicial

administration of the territories was diplomatic, not magisterial; and the criminal jurisdiction of the first and second-class chiefs alone was defined. In 1863, however, the country underwent an important change. The jurisdiction of all the chiefs was classified and defined: that of chiefs of the first and second classes was made plenary; that of lesser chiefs was graded in a diminishing scale. Four Political Agents of the *prānts*, resident in the four divisions of Kāthiāwār, now exercise residuary jurisdiction with large civil and criminal powers. Each Political Agent of a *prānt* has a deputy who resides at the headquarters of the *prānt* or division, and exercises subordinate civil and criminal powers. Serious criminal cases are committed by the deputies to the court of the Agent to the Governor, to whom also civil and criminal appeals lie. The Agent to the Governor is aided in this work by an officer known as the Political Agent and Judicial Assistant, who is usually a member of the Indian Civil Service. Appeals from his decisions lie direct to the Governor of Bombay in Council in his executive capacity. An officer styled the Superintendent of Managed Estates, who is *ex officio* an Assistant Political Agent, and two Deputy-Assistants also help the Agent.

In each division are several subdivisional *thānadārs*, holding petty magisterial powers over a circle of villages contiguous to their stations or *thānas*. These *thānadārs* administer 146 *tālukas* out of the 193 territorial divisions of Kāthiāwār; they possess certain powers of general administration as well as judicial authority. But as the larger principalities occupy more than 15,000 square miles of the total area of 20,882 square miles, the Agency through its Assistants, Deputy-Assistants, and *thānadārs* cannot be called upon to administer more than one-fourth of the entire area. There are 12 *thānas* in the peninsula. The *tālukdārs* are poor, ignorant, and in debt, and have only the semblance of authority. Inter-*tālukdār* relations are characterized by petty squabbles, small jealousies, and endless subdivision of estates.

The law administered by the *dārbāri* tribunals of the State is the customary law: namely, the Hindu and Muhammadan religious law as modified by local or tribal usage. The larger States have procedure and penal codes based on those in use in British India. To meet a particular class of land disputes, however, a special court was established in 1873. This was the Rājasthānik Court, constituted with the assent and at the cost of the chiefs. It decided, under the presidency of a British officer, all disputes as to *girās* or hereditary estates, between the chiefs and the *bhāyāds* and *mulgirāsias*, who are for the most part the kinsmen of the chiefs or the descendants of earlier holders who have been deprived of their estates. It surveyed and mapped out the *girāsia's* estate, fixed his miscellaneous dues, and defined his relation to his chief by laying down the extent of his obligations. The court

was originally established for three years; but it was continued for a succession of short periods, and was eventually abolished on April 1, 1899. Since its establishment the peace of Kāthiāwār has seldom been broken by the more unruly members of the chiefs' families; but a real or fancied grievance may still produce a body of outlaws; and as recently as 1892 a band of these *bahārwattias* was not captured until they had caused the death of the British officer in charge of the pursuing troops. At the present time disputes between the first four classes of chiefs are usually referred to the State courts, and are dealt with by the Agent to the Governor in appeal. Similar disputes between the *tālukdārs* of other classes are decided by the Judicial Assistant, subject to the control of the Agent to the Governor, according to rules published in 1898.

As each tribe of Rājputs invaded the peninsula, its chiefs bestowed on their relations portions of the land they had won. This share was named *kapāl girās*, and passed to the descendants of the original grantees. The more enterprising *girāsias* continued to acquire fresh lands from their neighbours, until they found themselves sufficiently strong to set up as independent rulers. Others, less enterprising, surrendered the greater portion of the land to a neighbouring chief in return for protection, and fell into the position of *mulgirāsias* or 'original sharers.' When a *girāsia* succeeded in gaining his independence he became a *tālukdār*, and assumed the title of Thākur, Rāval, Rānā, or Rājā. As he rose in the social scale, the landed proprietor became anxious to leave his possessions intact to his eldest son; at the same time the custom of the country compelled him to set aside a portion of his estates for each of his younger sons, and these in turn became *girāsias* owing submission to the head of the family, but otherwise independent. Thus in Kāthiāwār landed property has been minutely subdivided, and the process still continues, so that some estates not larger than a single village have upwards of a hundred shareholders. As a rule, the revenue control of these estates has been left to the shareholders, except during minority, &c. In addition to the landed estates held by *tālukdārs* and *girāsias*, many villages or portions of villages are held hereditarily as religious and service grants. Another large class of proprietors are *jīvaidārs*, or holders of estates as maintenance or on service tenure. They have not the position or privileges of *girāsias*, and possess neither civil nor criminal jurisdiction. Some of them are life tenants. Common forms of service tenure are lands held by village headmen, watchmen, or scavengers, or by tribes such as the Mers who pay a hearth-tax and a plough-tax for cultivation, though in some cases holding rent free. The *tālukdārs* of Kāthiāwār have absolute power over property in their private or *khālsa* land. The landlord's rent or *rāj bhāg* is a fixed share of the produce. In practice this share is supplemented by numerous

petty cesses, some of which are taken by the proprietor, while others are devoted to village expenses.

During the last thirty years considerable improvements have been introduced into the revenue system. Previously whole subdivisions were farmed to the highest bidders, who in turn sublet villages or shares of villages. The farming system has now been almost completely abandoned, and a scientific revenue survey has been introduced in nearly all parts of the peninsula.

In Kāthiāwār the organization of the village community has still considerable vitality. The prevalence of a system of revenue collection in kind imposes a special demand on the watchfulness of the headman and his subordinates. Even the smallest villages have their *pātel*, *havildār*, and *pagi*, who, like the priest, carpenter, tailor, and scavenger, are remunerated for their services by payment in kind. Under recent arrangements, the village police under the Agency *thāna* circles are paid in cash and not in kind.

The table given on pages 165-9 shows that in 1903-4 the total revenue of the Agency was estimated at 194 lakhs, while the tribute amounted to nearly 11 lakhs, about 7 lakhs payable to the British, 2·9 lakhs to the Gaikwār, and Rs. 92,400 to Junāgarh, compared with 165½ lakhs and 11 lakhs respectively in 1880. Of the 193 States, 12 pay no tribute, 105 are tributary to the British Government, and 79 to the Gaikwār of Baroda, while 134 pay tribute also to the Nawāb of Junāgarh. As the financial accounts of the States, except those temporarily under management, are never submitted to the Agency, the revenue entered in the table above referred to must be considered only approximately correct. A large share of the revenue is never brought to book in the State accounts, being credited to the private income of the chief or of the members of his family. Villages are assigned in maintenance or alienated, and taxes are farmed and their proceeds carried to some private account. The greater part of the revenue in every State is derived from the land, the general rule being to take a fixed share of the crops, supplemented by cash cesses, the total averaging from one-third to one-half of the crops. The States which possess a seaboard levy an export duty on all field produce leaving the State limits by any land route, in order to turn trade to their own ports. The maritime States not only levy import and export duties, but have also a monopoly of the manufacture of salt, a branch of revenue of increasing importance. All jurisdictional States also retain the monopoly of the sale of opium, and are entitled to two-thirds of the value of all smuggled opium seized within their territories. Other items of revenue are house taxes levied on artisans and shop keepers, and taxes on labourers, shepherds, &c. Stamp duties and fees are levied on various judicial processes. Under the authority

of Government, an improvement cess of two annas per acre has been imposed on subordinate landholders for the last thirty years. There is no regular classification of land. Assessment is levied chiefly in kind, but it works out at about Rs. 2 to Rs. 2·8 per acre for 'dry crops' and Rs. 5 to Rs. 6 for irrigated crops.

The British rupee is current throughout the peninsula. There is a local mint at Junāgarh, of which the coins are current in that State alone. The silver coins are *koris* and half-*koris*, the copper coins being known as *dhinglas*, *dokdas*, and *trambia*. The Bhaunagar mint was closed in 1840 under an arrangement with the Bombay Government.

Municipal taxes are levied in many of the large towns. Since 1879 a certain amount has been contributed by each State and landed proprietor in Kāthiāwār, and credited to a general Local fund administered by the Agent to the Governor. All expenses connected with the improvements of the Agency are met from this fund, which has an income of 1·8 lakhs, with a balance in 1904 of 5 lakhs.

Imperial service troops are maintained at Bhaunagar, Junāgarh, and Jāmnagar, which each equip a small force of cavalry. The British troops at Rājkot consisted in 1905 of a regiment of Native infantry.

There is no general police force in Kāthiāwār. The chiefs are bound by stipulation to preserve order and indemnify losses through crime committed in their territory. In 1903–4 the Agency police, which is employed at a cost of 2·4 lakhs in *thānas* and civil stations, numbered 998 men; while, so far as information can be obtained, the several States maintained a stipendiary police force aggregating 5,378 men, at a cost of 7·7 lakhs. In that year 6,114 offences were reported and 7,479 persons were arrested, of whom 4,218 were convicted and 2,820 acquitted. Conviction is generally sought through the agency of an informer. The daily average of prisoners in the Rājkot jail was 103. At the present time life and property are as safe in Kāthiāwār as in the Districts of British India.

Of the total population, 9·7 per cent. (17·7 males and 1·3 females) could read and write in 1901. Education has made rapid strides of late years. In 1858 there were 59 schools and 1,909 pupils, increasing in 1881 to 599 schools with 33,000 pupils; in 1891 the numbers further rose to 939 schools and 59,804 pupils. In 1903–4 the number of institutions, including 224 private schools, was 1,200, attended by 80,041 pupils, of whom 10,108 were girls. These include 2 Arts colleges, 11 high schools (including the Rājkumār College and the Gondal Girāsia School), 42 middle schools (including the Tālukdāri Girāsia School), and 2 training schools. At the Rājkumār College and the Girāsia Schools the advantages of a liberal education are enjoyed by many of the chiefs during their minority. The total amount spent on education in 1903–4, including the amount spent on

the Rājkumār College (Rs. 45,000) and Girāsia Schools (Rs. 33,000), was 8·3 lakhs, of which Provincial funds contributed 0·4 per cent., the revenue of the States 78·7 per cent., and other sources 2·7 per cent., while 18·6 per cent. was recovered as fees.

There are 124 hospitals and dispensaries in Kāthiāwār. The patients treated at these institutions in 1903–4 numbered 739,000, of whom 15,813 were in-patients. Nearly 54,000 persons were vaccinated in the same year.

Kāthor.—Town in the Kāmrej *tāluka*, Navsāri *prānt*, Baroda State, situated in 21° 17′ N. and 72° 59′ E., on the northern bank of the Tāpti river, about 22 miles from Navsāri and 10 miles from Surat. Population (1901), 4,407. The town possesses a Munsif's court, a dispensary, vernacular schools, an industrial school, and public offices. The place is remarkable for the number of Musalmāns, of whom there are no fewer than 2,444. They are chiefly Bohrās of the Sunni persuasion; and being people of great enterprise they repair in great numbers to Mauritius, China, Natal, and other distant places, where they stay for long periods, and return to Kāthor after amassing sufficient wealth to enable them to settle permanently at home. The principal articles of trade in the town are grain, printed calicoes, and cotton cloth.

Kathiwāra.—*Thakurāt* in the BHOPĀWAR AGENCY, Central India.

Kathoriā.—*Bhūmiāt* in the BHOPĀWAR AGENCY, Central India.

Kāthrota.—Petty State in KĀTHIĀWĀR, Bombay.

Kathua.—Overgrown village in the Jasrota district, Jammu province, Kashmīr, situated in 32° 22′ N. and 75° 32′ E., on the right bank of the Rāvi and between it and the Ujh river. Population (1901), 5,801. Kathua possesses no points of interest. The buildings are mean and dilapidated, and the place has no past and no future. The climate is unhealthy, and the water-supply scanty and bad.

Kathumar.—Head-quarters of a *tahsīl* of the same name in the State of Alwar, Rājputāna, situated in 27° 19′ N. and 77° 5′ E., about 35 miles south-east of Alwar city, and 9 miles north-east of Kherlī station on the Rājputāna-Mālwā Railway. The town is said to be 800 years old; it possesses a fort, a post office, and a vernacular school. The population in 1901 was 3,388. The *tahsīl* is situated in the south-east of the State, and in 1901 contained 78 villages, with a population of 41,152, of whom 90 per cent. were Hindus. Under Mughal rule it was attached to the province of Agra, but, from its proximity to Jaipur, was generally held as a fief by the Jaipur chief. From 1778 to 1784 the Mughals held direct possession, but in the latter year the Marāthās overran and occupied it. Their oppressions aroused the local population, who invoked the aid of Mahārao Rājā Bakhtāwar Singh about 1802. The latter sent a strong force, which expelled the Marāthās and occupied the fort of Kathumar; but in 1803 the Marāthā troops, in

their retreat before Lord Lake, bombarded the town and fort and expelled the Alwar garrison. It was this army which was annihilated three days later at LASWĀRI. Just before the battle the *tahsīl* of Kathumar had been granted to the Mahārājā of Bharatpur; but as he broke his engagements with the British, it was resumed in 1805 and ceded to Alwar.

Kātiādi.—Village in the Kishorganj subdivision of Mymensingh District, Eastern Bengal and Assam, situated in 24° 15′ N. and 90° 48′ E. Population (1901), 1,472. It is one of the most frequented bazars in the south of the District.

Katihār.—Town in the head-quarters subdivision of Purnea District, Bengal, situated in 25° 34′ N. and 87° 35′ E. Population (1901), 9,761. Katihār, which was formerly known as Saifganj, is an important railway junction, at which the Bengal and North-Western Railway meets the Bihār section of the Eastern Bengal State Railway. The latter is continued to Manihārī Ghāt on the Ganges, whence a steamer plies to Sakrigāli, establishing communication also with the East Indian Railway. There is a large export of rice and mustard seed. The town is the head-quarters of the sheep-breeding trade, and rough blankets are manufactured by a colony of Gareris settled there.

Kātmāndu.—Capital of the kingdom of Nepāl, situated towards the western side of the Nepāl Valley, on the east bank of the Vishnumati river, at its junction with the Bāghmati; approximate position, 27° 42′ N., 85° 12′ E. It is the largest city in Nepāl, and has a population which is roughly estimated at from 70,000 to 80,000. Most of the inhabitants are Newārs, of whom about two-thirds are Buddhists. Kātmāndu is said to have been founded by Rājā Gūnakāmadeva about A.D. 723. The earliest name by which the city was known was Manju Pātan, after the Buddhist saint Manjūsri. Tradition asserts that the plain of Kātmāndu was covered by a great lake, till the saint cut the dam with his sword and so released the water.

The general shape of the city is very irregular, and is supposed by the Hindus to resemble the *khara* or sword of the goddess Devī, while the Buddhist Newārs declare it to have been built after the shape of the sword of Manjūsri. Its modern name is said to be derived from an ancient building which stands in the heart of the city near the royal palace, and which is still known as Katmāndu from *kāt* 'wood' (of which material it is chiefly composed), and *mandi* or *mandon*, 'an edifice.' This building was erected by Rājā Lachmina Singh Mal, in 1596, as a house of accommodation for religious mendicants. Prior to the Gurkha conquest of the country in 1769, Kātmāndu was the seat of government of Newār kings who, with the princes of the neighbouring towns of Pātan and Bhātgaon, reigned over the Valley of Nepāl and adjacent country (*see* NEPĀL). Of the high walls, with their

numerous gateways, which once surrounded the city, considerable portions have been demolished or have fallen into disrepair.

The town is a labyrinth of narrow streets, most of which are impassable for carriage traffic and indescribably filthy. The buildings on either side are densely crowded, and are usually from two to four storeys high. They are made of brick, and tiled, and are built in the form of hollow squares, opening off the streets by low doorways, the central courtyards serving as receptacles for rubbish of every sort. In contrast to this dirt and squalor is the wealth of wood-carving which ornaments the façades of the houses. Most of these have projecting wooden windows or balconies, elaborately carved in beautiful designs. The streets generally lead to the *tols* or squares, of which there are many throughout the city. These are open spaces, paved, like the streets, with brick and stone, in which the various markets are held. The largest and most important building is the royal palace or Darbār. This covers a considerable extent of ground. On the west it faces an open square which contains many temples and a monolithic pillar. Opposite the north-west corner of the Darbār stands a large semi-European building called the Khot, which is famous as having been the scene of the massacre in 1846 of almost all the leading men of the country, by which Sir Jang Bahādur established himself in power. The Darbār is now used only for ceremonial purposes, as a residence for various relations of the king, and as public offices. The king, the Minister, and most of the nobles in the country have long since given up living within the city, and have built themselves imposing palaces and houses in European style outside it.

Kātmāndu, though a filthy city, presents an exceedingly picturesque appearance. This is, in a great measure, due to the Chinese style of architecture which predominates. Many of the temples are like pagodas, of several storeys in height, and profusely ornamented with carvings, paintings, and gilding. The roofs of many of them are entirely of brass, or copper gilt, and along the eaves of the different storeys are hung numerous little bells which tinkle in the breeze. At some of the doorways, which are often copper gilt, are placed a couple of large stone lions or griffins, with well-curled manes. Immediately outside the city is a fine parade-ground nearly a mile in length, surrounded by an avenue of trees and ornamented with modern equestrian statues of various Ministers.

A good water-supply was introduced in 1892, and lately drainage works have been started. There are two hospitals—one for women, the other for men—a school, and a free library.

A British Resident, with a small staff and escort, is stationed at Kātmāndu. The Residency is situated about a mile out of the city on the north side, in what was formerly a barren patch of ground, supposed

to be haunted by demons, but now one of the most beautiful and best-wooded parts of the Valley. Within the grounds is a British post office under the control of the Resident.

Katnī.—Railway junction in the Murwāra *tahsīl* of Jubbulpore District, Central Provinces, situated in 23° 50′ N. and 80° 24′ E., on the East Indian Railway, 673 miles from Bombay and 727 from Calcutta, adjoining the town of Murwāra. It is connected with Bilāspur on the main line of the Bengal-Nāgpur system by a link of 168 miles, and with Bīna on the Midland section of the Great Indian Peninsula Railway from Itārsi to Agra by one of 163 miles. These two connecting lines may eventually form part of the through route from Calcutta to Karāchi.

Kātodia.—Petty State in KĀTHIĀWĀR, Bombay.

Kātol Tahsīl.—Western *tahsīl* of Nāgpur District, Central Provinces, lying between 21° 2′ and 21° 31′ N. and 78° 15′ and 78° 59′ E., with an area of 800 square miles. The population in 1901 was 162,588, compared with 157,100 in 1891. The density is 200 persons per square mile. The *tahsīl* contains five towns—KATOL (population, 7,313), the head-quarters, NARKHER (7,726), KELOD (5,141), MOHPĀ (5,336), and MOWĀR (4,799)—and 356 inhabited villages. Excluding 56 square miles of Government forest, 77 per cent. of the available area is occupied for cultivation. The cultivated area in 1903–4 was 540 square miles. The demand for land revenue in the same year was Rs. 2,57,000, and for cesses Rs. 22,000. The *tahsīl* contains tracts of very fertile land in the valleys of the Wardhā and Jām rivers, and some hilly and stony country to the south. It is one of the great cotton-growing areas of the Province.

Kātol Town.—Head-quarters of the *tahsīl* of the same name, Nāgpur District, Central Provinces, situated in 21° 17′ N. and 78° 36′ E., on the Jām river, 36 miles west of Nāgpur city by road. Population (1901), 7,313. The suburb of Budhwāra on the opposite side of the river has recently been included in its limits. Within the town are the ruins of an old fort, and a curious temple of very early date built entirely of layers of sandstone with many grotesque carvings. Kātol is not a municipality, but a town fund is raised for sanitary purposes. It is one of the important cotton markets of the Province, and contains 4 ginning factories with 160 gins and 3 cotton-presses, having a total capital of about 5 lakhs. The mangoes grown locally have some reputation. Kātol has an English middle school and a dispensary.

Katosan.—Petty State in MĀHĪ KĀNTHA, Bombay.

Katra (or Mīrānpur Katra).—Town in the Tilhar *tahsīl* of Shāhjahānpur District, United Provinces, situated in 28° 2′ N. and 79° 40′ E., on the Oudh and Rohilkhand Railway. Population (1901), 6,209. The town generally is built of mud, and contains a police station, a

dispensary, and a branch of the American Methodist Mission. Between this place and Fatehganj East in Bareilly District was fought the battle in which the united British and Oudh forces defeated the Rohillas under Rahmat Khān, and effected the annexation of Rohilkhand to Oudh. Katra is administered under Act XX of 1856, with an income of about Rs. 1,500. There is a considerable export of local produce by railway. The middle school has 128 pupils.

Katūmbar.—*Tahsīl* and head quarters thereof in Alwar State, Rājputāna. *See* KATHUMAR.

Kātwa Subdivision.—North-eastern subdivision of Burdwān District, Bengal, lying between 23° 26′ and 23° 50′ N. and 87° 44′ and 88° 17′ E., with an area of 404 square miles. The subdivision is a flat alluvial tract, and in the east, along the banks of the Bhāgīrathi, the soil is waterlogged and swampy. The population in 1901 was 248,806, compared with 230,227 in 1891, the density being 616 persons per square mile. It contains two towns, KĀTWA (population, 7,920), its head-quarters, and DAINHAT (5,618); and 465 villages. Large annual fairs are held at Agradwīp and Dādia. The manufacture of *tasar* silk is an important industry.

Kātwa Town.—Head-quarters of the subdivision of the same name in Burdwān District, Bengal, situated in 23° 39′ N. and 88° 8′ E., at the junction of the Bhāgīrathi and Ajay rivers. Population (1901), 7,220. Kātwa was at one time considered the key to Murshidābād when that town was the capital of Bengal, and an old fort here was the scene of the defeat of the Marāthās by Alī Vardi Khān. It is held sacred by the Vaishnavas, as having been the place where their apostle Chaitanya entered upon the life of an ascetic. Steamers used to visit it the year round, but owing to the silting up of the Bhāgīrathi and the opening of the East Indian Railway its commercial importance has greatly declined; it is now proposed to construct a branch railway from Hooghly. Kātwa was constituted a municipality in 1869. The income during the decade ending 1901–2 averaged Rs. 7,800, and the expenditure Rs. 7,000. In 1903–4 the income was Rs. 10,200, half of which was derived from a tax on persons (or property tax); and the expenditure was Rs 8,300. The town contains the usual public offices; the subsidiary jail has accommodation for 24 prisoners.

Kauriāla (also called Karnāli).—River of Northern India, rising in Tibet, not far from one of the sources of the Sutlej, in 30° 40′ N. and 80° 48′ E. After leaving Tibet by the Taklā Khār or Yāri pass, it flows through Nepāl, generally in a south-easterly direction, till it emerges from the lower range of the Himālayas through a deep picturesque gorge known as Shīshā Pānī ('glass water'). The stream here is about 300 yards broad and of great depth, with a slow current, closely shut in by precipitous cliffs 2,500 feet high. A little below Shīshā

Pānī the channel widens, with a steeper and rockier descent, causing magnificent rapids nearly half a mile broad. Lower down the river divides into two, the western branch retaining the name of Kauriāla or Karnāli, the eastern being called the GIRWĀ. Formerly the latter was an insignificant stream, but its volume has gradually increased till it is now considerably larger than that of the Kauriāla. They are both rapid rivers, with pebbly beds and fords which an elephant can generally cross without difficulty. Eighteen miles from its point of exit from the hills the Kauriāla enters British territory, at the point where it receives the Mohan, and marks the boundary between the Oudh Districts of Kherī and Bahraich. It now receives on the east bank its former offshoot, the Girwā, and on the west the Suhelī, Dahāwar, and Chaukā, all branches of the SĀRDĀ river. From the point of confluence with the Chaukā the united rivers become the GOGRA, which ultimately falls into the Ganges on its left bank, a little above Dinapore. The Kauriāla is navigable by large boats of about 17 tons burden beyond the limits of British territory. The principal traffic is the export of grain, and of timber, ginger, pepper, *ghi*, and catechu from Nepāl. Gold-washing is carried on by a caste called, after their occupation, Sonāhīs. The river abounds in fish.

Kāvali Tāluk.—*Tāluk* of Nellore District, Madras, lying between 14° 40′ and 15° 1′ N. and 79° 36′ and 80° 7′ E., and bounded on the east by the Bay of Bengal. Its area is 548 square miles, about one-third of which is *shrotriem* and *samīndāri*. The population in 1901 was 87,015, compared with 83,109 in 1891. It contains 77 villages, besides the head-quarters, KĀVALI (population, 8,635). The demand on account of land revenue and cesses in 1903–4 amounted to Rs. 2,41,000. The *tāluk* is generally flat, but contains a few isolated hills, while to the west and north-west are extensive low jungles, in parts very dense. The soil is poor, and large beds of laterite are frequently met with. The *tāluk* is drained by the Upputeru (an affluent of the Manneru), the Gundālavāgu, Ubbalivāgu, and Pillivāgu. There are 35 tanks under the charge of the department of Public Works, and 31 minor irrigation works. With a few exceptions these are rain-fed, and the supply is therefore not very certain. Irrigation from the Sangam dam across the Penner has been extended to two villages. 'Wet' cultivation is most common in the eastern portion. The consumption of rice has much increased of late years. Along the sea coast large tracts have been planted with palmyra palms and casuarina.

Kāvali Town.—Head quarters of the *tāluk* of the same name in Nellore District, Madras, situated in 14° 55′ N. and 80° E. Population (1901), 8,635. It contains a District Munsif's court and the usual offices.

Kāveri.—River of Southern India. *See* CAUVERY.

Kāveripāk.—Village in the Wālājāpet *tāluk* of North Arcot District, Madras, situated in 12° 54′ N. and 79° 28′ E. Population (1901), 5,566. It is known in history as the scene of the victory gained by Clive over Rājā Sāhib and his French allies in 1752. It is a flourishing place, lying to the south of the embankment of the large tank to which it gives its name. A small fort formerly stood near, but this has been destroyed. The tank is the most extensive in the District, its embankment being about 4 miles long. Upon this is built a little bungalow, with a view over the water towards the Sholinghur hills. Wild duck and other water-fowl are abundant. The tank, which is fed by a channel from the PĀLĀR, is rarely dry, but has much silted up in the course of years.

Kāveripatnam.—Village in the Krishnagiri *tāluk* of Salem District, Madras, situated in 12° 26′ N. and 78° 13′ E., on the right bank of the Ponnaiyār, 7 miles from Krishnagiri. Population (1901), 4,954. The place was regarded as of some strategical importance in the Mysore Wars, as it commanded the entrance to Dharmapuri *tāluk* and the Carnatic, and was strongly fortified. In 1767 the English took it from Haidar Alī; but the latter almost immediately recaptured it, and used it as a support in the next campaign until his withdrawal above the Ghāts. Colonel Wood then took the place, and in 1790 Colonel Maxwell made it his head-quarters before advancing against Tipū.

Kavlapur.—Town in the State of Sāngli, Bombay, situated in 16° 89′ N. and 74° 72′ E. Population (1901), 5,127. The town, formerly called Shingnāpur and Kavandanyapur, is built on stony undulating ground, and lies 5 miles north-east of Sāngli town, near a small stream which rises in the Dandoba hills and falls into the Kistna. This stream supplies the town with drinking-water, the well-water being brackish and unhealthy. The town contains a substantial schoolhouse, with accommodation for 100 boys, a Jain *bastī*, a Muhammadan *dargāh*, and fourteen Hindu temples, the most important of which is that of Siddheshwar.

Kawa.—South-eastern township of Pegu District, Lower Burma, lying between 16° 58′ and 17° 26′ N. and 96° 17′ and 96° 53′ E., with an area of 514 square miles. It is a flat area producing rice, and lying for the most part between the Pegu river and the mouth of the Sittang. In 1901 it contained 206 villages, with a population of 79,057, its inhabitants in 1891 having numbered 60,435. The head-quarters are at Kawa (population, 1,866), on the left bank of the Pegu river, not far from Tongyi railway station. The area cultivated in 1903–4 was 345 square miles, paying Rs. 6,59,800 land revenue.

Kawahi.—River in Sylhet District, Eastern Bengal and Assam. *See* KHOWAI.

Kawardhā.—Feudatory State in the Central Provinces, lying

between 21° 50′ and 22° 30′ N. and 80° 50′ and 81° 26′ E., with an area of 798 square miles. It lies on the border of the eastern range of the Sātpurā Hills, between the Districts of Bālāghāt, Drug, Bilāspur, and Mandlā. The western half of the State consists of hill and forest country, while to the east is an open plain. Kawardhā (population, 4,772), the head-quarters, is 54 miles from Tildā station on the Bengal-Nāgpur Railway. The name is believed to be a corruption of Kabirdhām or 'the seat of Kabīr,' and Kawardhā is the official head-quarters of the *mahants* of the Kabīrpanthī sect. At the village of Chhapri, 11 miles to the west of Kawardhā, is situated the fine old temple of Bhoram Deo. It is highly decorated, contains several inscriptions, and is assigned to the eleventh century. The Kawardhā family are Rāj Gonds and are related to the *zamīndārs* of Pandariā in Bilāspur, the Kawardhā branch being the junior. In the event of failure of heirs, a younger son of the Pandariā *zamīndār* succeeds. The estate was conferred for military services by Raghujī Bhonsla. The present chief, Jadunāth Singh, succeeded in 1891 at the age of six years. He is being educated at the Rājkumār College, Raipur, and during his minority the State is administered through the Political Agent for the Chhattīsgarh Feudatory States. The State contains 346 inhabited villages, and the population in 1901 was 57,474. It decreased by 37 per cent. in the preceding decade, during which Kawardhā was severely affected by famine in several years. The density is 72 persons per square mile. Gonds, Chamārs, Kurmīs, and Telis are the principal castes, and the Chhattīsgarhī dialect of Hindī is universally spoken.

In the open country there is a considerable quantity of good black soil. Included in Kawardhā are the three subordinate *zamīndāri* estates of Boriā, Bhondā, and Rengākhar, with an estimated total area of 405 square miles. These have not been surveyed, and no statistics for them are available. Of the remaining area, which has been cadastrally surveyed, 242 square miles are occupied for cultivation, of which 222 are under crop. The cropped area has considerably decreased in recent years owing to the unfavourable seasons. The principal crops are *kodon*, which covers 100 square miles, wheat 33, rice 35, and cotton 54. Only 165 acres are irrigated, from wells. About 452 square miles, or more than half the total area of the State, are forest. The forests consist mainly of inferior species, and *sāl* (*Shorea robusta*) is the principal timber tree. The State contains 36 miles of gravelled and 74 miles of embanked roads, constructed under the supervision of the Engineer of the Chhattīsgarh States division. The principal routes are those from Dongargarh to Pandariā, and from Kawardhā to Simgā.

The revenue of the State in 1904 amounted to Rs. 1,10,000, of which Rs. 70,000 was derived from land, Rs. 13,000 from forests, and

Rs. 10,000 from excise. The system of land revenue assessment is the same as in British territory, but the headmen of villages have no proprietary rights. Excluding the *zamīndāri* estates, which pay a revenue of Rs. 1,630, the incidence of land revenue is 8 annas 9 pies per cultivated acre. The usual cesses are realized with the land revenue. The expenditure in 1904 amounted to Rs. 1,12,000, the principal items being Government tribute (Rs. 32,000), allowances to the ruling family (Rs. 13,500), public works (Rs. 9,000), general administration (Rs. 9,600), and police (Rs. 6,000). The tribute is liable to periodical revision. Since 1893 the State has allotted Rs. 1,60,000 to public works, which has been mainly expended in the construction of the roads already mentioned and of buildings for the State offices. The expenditure on education in 1904 was Rs. 2,900, from which 12 schools with about 900 pupils are maintained. Only 879 persons were returned as literate in 1901, the proportion of the male population able to read and write being 3 per cent. A dispensary has been established at Kawardhā, at which 15,000 persons were treated in 1904. The relations of the State with Government are in charge of a Political Agent under the supervision of the Commissioner, Chhattisgarh Division.

Kawkareik Subdivision.—Subdivision consisting of the eastern half of Amherst District, Lower Burma, with head-quarters at KAWKAREIK. It contains two townships, KAWKAREIK and KYAIKMARAW.

Kawkareik Township.—North-eastern township of Amherst District, Lower Burma (formerly known as the Haungtharaw township), lying between 15° 37′ and 17° 2′ N. and 97° 59′ and 98° 51′ E., with an area of 1,963 square miles, bounded on the west by Haungtharaw, and on the east by Thaungyin and by Siamese territory. It is for the most part very hilly and very sparsely inhabited. The population was 22,512 in 1891, and 35,111 in 1901, distributed in 162 villages and one town, KAWKAREIK (population, 3,919), the head-quarters. The area cultivated has more than doubled during the past ten years. In 1903-4 it reached an aggregate of 50 square miles, paying Rs. 39,300 land revenue.

Kawkareik Town.—Head quarters of the subdivision of the same name in Amherst District, Lower Burma, situated in 16° 35′ N. and 98° 14′ E. The town lies in the north-east of the District, nearly 50 miles due east of Moulmein, stretching along both banks of the Kawkareik, a stream which flows from the western slopes of the Dawna range into the Haungtharaw river, and is navigable up to Kawkareik during the rains by boats of fairly heavy burden. The town is an important trade centre on the main caravan route between Moulmein and Siam. Population (1901), 3,919. In 1884–5 Kawkareik was placed in charge of a town committee, which was reconstituted in 1903.

The income administered by the town authorities was Rs. 8,700 in 1903-4, and the expenditure was Rs. 9,000, devoted chiefly to public works. The town possesses a civil hospital, with eight beds, which is supported by the town fund.

Kawlin.—Southernmost township of Kathā District, Upper Burma, lying between 23° 30′ and 23° 54′ N. and 95° 20′ and 96° E., on either side of the Sagaing-Myitkyina railway, with an area of 536 square miles. It was annexed in 1891 with the rest of the former Wuntho State. The population in 1901 was 28,114 (practically all Burmans), distributed in 239 villages. The head quarters are at Kawlin (population, 613) on the railway, the scene of some of the most exciting episodes in the Wuntho rebellion. The surveyed area under cultivation in 1903-4 was 70 square miles, and the land revenue and *thathameda* amounted to Rs. 1,05,400.

Kāyal.—Village in the Srīvaikuntam *tāluk* of Tinnevelly District, Madras, situated in 8° 40′ N. and 78° 5′ E., near the sea, on the northern bank of the Tāmbraparni river. It was once a famous port, and was visited in 1292 by Marco Polo, who calls it 'a great and noble city,' and notices it at length (Col. Yule's translation, vol. ii, p. 305). A similar glowing account of the place is given by two Persian historians quoted by Colonel Yule. Kāyal sprang into existence after KOLKAI, but the silt of the Tāmbraparni ruined both places as ports and has now turned them into inland villages. Relics of the ancient greatness of Kāyal are, however still discoverable in the shape of broken tiles and remnants of pottery. There are also two old temples with inscriptions. An interesting and detailed account of the place will be found in Bishop Caldwell's *History of Tinnevelly*.

Kayalpatnam.—A small port in the Srīvaikuntam *tāluk* of Tinnevelly District, Madras, situated in 8° 34′ N. and 78° 8′ E., a few miles to the south of the Tāmbraparni river and 12 miles south of Tuticorin; not to be confounded with Kāyal. It is a Union, with a population (1901) of 11,746. Its sea-borne trade, which is chiefly in rice and coco-nuts with Ceylon and in timber and areca-nuts with Travancore, is carried on by the Musalman tribe of Labbais. There is also some trade in palmyra-leaf boxes and jaggery (coarse sugar), and a large salt factory is at work.

Kāyankulam.—Town on the backwater of the same name in the Kārtikapalli *tāluk* of Travancore State, Madras, situated in 9° 11′ N. and 76° 30′ E. Population (1901), 5,745. Formerly capital of an independent principality known as Onād, it held an equal position with Venād, or Travancore. In the sixteenth century it was an important harbour where the Portuguese had a factory. The Onād Rājā was the earliest Malabar ally of the Dutch. After a protracted war, he submitted to Travancore in 1746. In A.D. 829 one of the earliest Syrian

Churches was founded here. The place has a well-attended market and a magistrate's court.

Kedārnāth.—Famous temple and place of pilgrimage in Garhwāl District, United Provinces, situated in 30° 44′ N. and 79° E., immediately below the snow peak of Mahāpanth, at an elevation of 11,753 feet above sea-level. It marks the spot where Sadāsiva, a form of Siva, in his flight from the Pāndavas, assumed the form of a buffalo and attempted to dive into the earth to escape his pursuers, but left his hind quarters on the surface. A rock is still worshipped as part of the deity, and the remaining portions of his body are reverenced elsewhere: at Tungnāth, Rudranāth, Madhyamaheshwar, and Kalpeshwar. Four miles from the temple on the way to the Mahāpanth peak is a precipice known as the Bhairab Jhāmp, where devotees formerly committed suicide by flinging themselves from the summit; but the British Government suppressed this practice shortly after annexation. The *Rāwal* or chief priest of Kedārnāth is always a Jangama from Mysore or some other part of Southern India. Large numbers of pilgrims annually visit Kedārnāth.

Kedgeree (*Khejri*).—Village in the Contai subdivision of Midnapore District, Bengal, situated in 21° 52′ N. and 87° 59′ E., on the right bank of the Hooghly river. Population (1901), 1,457. This was formerly an important anchorage, and close by is an old English burial-ground containing numerous graves of Europeans who died on shipboard off the coast.

Kehsi Mansam (Burmese, *Kyithi Bansan*).—State in the eastern division of the Southern Shan States, Burma, lying between 21° 48′ and 22° 15′ N. and 97° 40′ and 98° 22′ E., with an area of 632 square miles. It is bounded on the north by the Northern Shan States of Hsīpaw and South Hsenwi; on the east by Kenglon, Manglon, and Monghsu; on the south by Mongnawng and Mongküng; and on the west by Möngküng. In early days Kehsi Mansam formed part of North Hsenwi, but was made a Myozaship in 1860. The State consists chiefly of open rolling country, nowhere rising to any great height. Around the capital and to the east of it are almost treeless downs. Between the Nam Pang and the border of Manglon are two circles, undulating like the rest, but covered with scrub jungle. To the north and west the downs become low hills, as yet untouched by the *taungya* cultivator; in the valleys between these hills most of the 'wet' rice of the State is grown. The chief river is the Nam Heng, which separates the State from Hsīpaw and joins the Nam Pang. Rice is grown in both irrigated fields and *taungyas*, the other crops being cotton, tobacco, and sesamum. Kehsi Mansam is, however, a commercial rather than an agricultural State. A good deal of business is done with Tawngpeng in tea; and there is a considerable trade in agricultural implements and

bamboo hats (the Burmese *kamauk*), which are made in the northern part of the State. The population in 1901 was 22,062 (distributed in 378 villages), of whom about 19,500 were Shans, and about 2,500 Yins (Yanglam). Kehsi Mansam (population, 618), in the western part of the State, on the Nam Heng, is a trading centre of some importance, and was once a large town. The revenue in 1903-4 amounted to Rs. 15,000 (mainly from *thathameda*); the chief items of expenditure were Rs. 8,000 tribute to the British Government, Rs. 4,000 general administration charges, Rs. 2,000 privy purse, and Rs. 1,000 public works.

Kekri.—Town in Ajmer-Merwāra, Rājputāna, and the head-quarters of an Extra-Assistant Commissioner, situated in 25° 25′ N. and 75° 13′ E. Population (1901), 7,053, including 5,472 Hindus, 1,193 Muhammadans, and 364 Jains. Kekri was formerly a thriving commercial town, but has of late years declined in importance. The municipal income in 1902–3 was about Rs. 14,000. The water-supply is scarce and bad. Kekri possesses three hydraulic cotton-presses and a ginning factory.

Keladi.—Village in the Sāgar *tāluk* of Shimoga District, Mysore, situated in 14° 13′ N. and 75° 1′ E., 4 miles north of Sāgar town. Population (1901), 1,595. It was the place of origin, at the close of the fifteenth century, of the chiefs who became kings of the whole of the north-west of Mysore, and of the Kanarese districts below the Ghāts, and continued in power till overthrown by Haidar Ali in 1763. They were at first tributary to Vijayanagar, but assumed independence after the fall of that empire. The capital was first removed to Ikkeri, and eventually to Bednūr

Kelāpur Tāluk.—*Tāluk* of Yeotmāl District (formerly known as Wūn), Berār, lying between 19° 50′ and 20° 29′ N. and 78° 2′ and 78° 51′ E., with an area of 1,080 square miles. The population fell from 105,926 in 1891 to 103,657 in 1901, the density being 96 persons per square mile. The *tāluk* contains 310 villages, but no town. The head-quarters are at Pāndharkawada (population, 1,992), near the small village of Kelāpur, from which the *taluk* takes its name. The *taluk* contains a larger proportion of Gonds than any other in Berār. It marched with, and probably at times formed part of, the Gond kingdom of CHĀNDA. The demand for land revenue in 1903–4 was Rs. 1,35,000, and for cesses Rs. 8,000. The *tāluk* lies in the Bālāghāt or southern plateau of Berār, but possesses fertile tracts in the valleys of the Wardhā and Pengangā rivers, which bound it on the north and south.

Kelāt-i-Ghilzai.—Fort in Kandahār province, Afghānistān. *See* KALĀT-I-GHILZAI.

Kelod.—Town in the Kātol *tahsil* of Nāgpur District, Central Provinces, situated in 21° 27′ N. and 78° 53′ E., 28 miles from Nāgpur

city on the Chhindwāra road. The name is probably an abbreviation from *keljhar*, 'a plantain-tree,' as plantain groves were formerly numerous here. Population (1901), 5,141. The town contains an old fort. It is not a municipality, but a town fund is raised for sanitary purposes. A cotton-ginning factory has recently been opened. The chief local industry is the manufacture of large brass water-vessels. There is a vernacular middle school.

Kelve-Māhīm.—Head-quarters of the Māhīm *tāluka* of Thāna District, Bombay, situated in 19° 36′ N. and 72° 44′ E., about 5½ miles west of the Pālghar station on the Bombay, Baroda, and Central India Railway, and 56 miles north of Bombay. Population (1901), 5,699. The village of Kelve, whose name is thus joined with Māhīm, lies on the opposite side of a creek about 2½ miles to the south. The coast is very rocky near the harbour, and a reef stretches for 2 miles from the shore. A small island fort lies opposite the village of Kelve. Near the two creeks which form the harbours of Māhīm and Kelve are two small forts, forming links in the chain built by the Portuguese along the coast of the *tāluka*. The town is to a large extent occupied by gardens, and has a fair trade in plantains, sugar-cane, ginger, and betel-leaf. Delhi Musalmāns had possession of Māhīm in 1350; Gujarāt governors succeeded; in 1532 the Portuguese occupied it; and in 1612 it was bravely held against the Mughals. The tomb of a Portuguese nobleman has been unearthed and its slab placed in the Collector's garden at Thāna. Kelve-Māhīm has been a municipal town since 1861. During the decade ending 1901 the income averaged Rs. 8,000. In 1903–4 the income was Rs. 7,700. Kelve village was included in the Māhīm municipality in 1890. The town contains a dispensary, and 6 schools for boys with 356 pupils and one for girls with 51 pupils.

Kelwārā.—Head-quarters of the Kūmbhalgarh *pargana* in the State of Udaipur, Rājputāna, situated in 25° 7′ N. and 73° 36′ E., in the heart of the Arāvalli Hills, about 2½ miles south of the Kūmbhalgarh fort and 38 miles north of Udaipur city. Population (1901), 1,204. It was in Kelwārā that Rānā Ajai Singh found refuge when his father, Rānā Lakshman Singh, and his seven brothers had been killed defending Chitor against Alā-ud-dīn at the beginning of the fourteenth century.

Ken (or Kayān; Skt. *Karnāvati*; the *Kainas* of Arrian).—River of Bundelkhand. It rises in the north-western slopes of the Kaimur Hills (23° 54′ N., 80° 10′ E.), and flowing north-east through Damoh and Pannā enters Bāndā District in the United Provinces near Bilharkā. After a course of more than 100 miles along the border of and through Bāndā, it joins the Jumna near Chillā, on the road from Bāndā to Fatehpur, 230 miles from its source. The river flows in a deep, well-defined bed, and is navigable for small boats as far as Bāndā town; but there is not much traffic. At Bāndā the bed is sandy, but pebbles and

fragments of quartz and other rocks are found in it, which are polished and made into ornaments. Above Bāndā the bed becomes more rocky, and the scenery near Kharaunī is singularly beautiful. A canal taking off from the river near Bariārpur in the Ajaigarh State has recently been completed. At present it is designed to irrigate only a part of Bāndā District: namely, the area between the Ken and Bāghain, of which it will command about half, or 374,000 acres. The reservoir formed in connexion with this project will impound about 182 million cubic feet of water in the valley of the river.

Kendrāpāra Subdivision.—North-eastern subdivision of Cuttack District, Bengal, lying between 20° 18′ and 20° 48′ N. and 86° 15′ and 87° 1′ E., with an area of 977 square miles. The population in 1901 was 467,081, compared with 429,770 in 1891. The subdivision is a deltaic alluvial tract, bounded on the east by the Bay of Bengal and intersected by numerous rivers and streams. The strip along the coast is very sparsely populated, but the density rises towards the west, and the average for the whole subdivision is 478 persons per square mile. It contains one town, KENDRĀPĀRA (population, 15,245), its head-quarters; and 1,338 villages.

Kendrāpāra Town.—Head-quarters of the subdivision of the same name in Cuttack District, Bengal, situated in 20° 30′ N. and 86° 25′ E. Population (1901), 15,245. Its position on the Kendrāpāra Canal in the heart of a rich rice-producing country gives it a considerable trade; and it is connected by road with Cuttack, Jājpur, and Chāndbālī. It was constituted a municipality in 1869. The income and expenditure during the decade ending 1901–2 averaged Rs. 8,000. In 1903–4 the income was Rs. 11,200, of which Rs. 6,700 was derived from a tax on persons (or property tax); and the expenditure was Rs. 11,100. Besides the usual public buildings, Kendrāpāra possesses a good school and dispensary, and a public library has lately been opened for the circulation of English and vernacular literature. The sub-jail has accommodation for twelve prisoners.

Kenduli.—Village in the head-quarters subdivision of Bīrbhūm District, Bengal, situated in 23° 38′ N. and 87° 26′ E., on the north bank of the Ajay river. Population (1901), 774. It was the birthplace of Jayadeva, the author of the celebrated *Gīta Gobinda*, a Sanskrit poem in praise of Krishna Chaitanya, who was a disciple of the Vaishnav reformer. An annual fair in honour of Jayadeva is held in the village on the last day of Pūs (the middle of January), which is attended by 50,000 persons.

Kenery.—Island near the entrance of Bombay harbour, off the mainland of Kolāba District, Bombay. *See* KHĀNDERI.

Kenghkam (Burmese, *Kyaingkan*).—Small State in the eastern division of the Southern Shan States, Burma, lying between 20° 50′ and

21° 7′ N. and 98° 20′ and 98° 37′ E., with an area of 167 square miles. It lies on both sides of the Nam Pang, and is bounded on the north by Möngnawng and a detached portion of Möngnai; on the east by a detached portion of Möngnawng and by the Salween river; and on the south and west by Möngnai. Rice is cultivated in the plain lying along the western bank of the river and on the hills to the west, but owing to the loss of population a large number of paddy-fields are fallow. The population of the State in 1901 was 5,458, practically all Shans, distributed in 52 villages. The residence of the Myoza is at Kenghkam (population, 1,203), a picturesquely situated village on the Nam Pang, a few miles north of the point where that stream flows into the Salween. The revenue in 1903–4 amounted to Rs. 4,000 (mostly from *thathameda*), and the tribute to the British Government is Rs. 2,000.

Kenglön (Burmese, *Kyainglon*).—Small State in the eastern division of the Southern Shan States, Burma, lying geographically within the borders of Kehsi Mansam, but abutting in the south-east on Mönghsu. It is situated between 21° 51′ and 22° 2′ N. and 98° 2′ and 98° 13′ E., with an area of 43 square miles. Kenglön used at one time to form part of North Hsenwi. The country is undulating on the whole, and the land is fertile. The main crop is lowland rice; and the people, who in 1901 numbered 4,250 (practically all Shans), export a good deal of rice. The population was distributed in 69 villages, of which the largest is Kenglön, the residence of the Myoza (population, 341), west of a chain of low hills towards the north of the State. The revenue in 1903–4 amounted to Rs. 4,000, and the tribute to the British Government is Rs 1,500.

Kengtung (Burmese, *Kyaington*).—A division of the Southern Shan States, Burma, and a State under a Sawbwa, residing at the capital, Kengtung. It is the largest Native State in Burma, having an area of about 12,000 square miles, and is situated between 20° 4′ and 22° 10′ N. and 98° 28′ and 101° 9′ E., lying, with the exception of a small area between the mouth of the Nam Hka river and the Takaw ferry, entirely east of the Salween. On the north it is bounded by the newly drawn Chinese frontier; on the east by China; on the south by the French Lao territory and Siam; and on the west by the Southern Shan States of Möngpan, Möngnai, and Möngnawng, and the Northern Shan State of Manglon, from which it is separated by the Nam Hka river. It includes the dependencies of Hsenyawt, Hsenmawng, Mönghsat, Möngpu, and Western Kengcheng. A good deal of the early history of Kengtung is purely legendary. It is clear, however, that the State has suffered much in the past at the hands of the Siamese and the Chinese, both of whom invaded it several times between the middle of the eighteenth and the middle of the nineteenth century. Some of the main features of the history of Kengtung since

the annexation of Upper Burma are given in the article on the SOUTHERN SHAN STATES. The country is broken and mountainous, the hill ranges having a general north and south tendency; about two-thirds of it lies in the basin of the Mekong, and about one-third in the basin of the Salween, the watershed being a hill range varying from 5,000 to 7,000 feet in height. The climate in the valleys is extremely enervating during the rains; dense fogs prevail in the cold season, and the valleys are much hotter than their altitude would lead one to expect, while the daily range of temperature is large. Rice is the staple, but fruit of all kinds is cultivated in the gardens, while on the uplands cotton is the main crop. On the highest hills poppy is grown in addition to *taungya* rice and sesamum, and tea is cultivated for local consumption. There are rich forests, the revenue from which amounted in 1904 to Rs. 34,000. The population of the State in 1901 was 190,698, of whom 139,735 were returned as Buddhists and 50,039 as Animists. The people are Shans (Hkün and Lü), or belong to a variety of hill tribes, of which the most important are the Kaws or AKHAS, the Muhsös, and the WAS (Tai Loi, &c.). Divided by languages, 57,058 persons spoke Shan, 42,160 Hkün (the language of the Kengtung valley), 27,652 Akha, 19,380 Lu (the language of the valley between Kengtung and the Mekong), and 44,448 other vernaculars, such as Palaung, Kachin, and Lisaw. The population in 1901 was distributed in 2,338 villages, the only urban area of any size being the capital, KENGTUNG (population, 5,695). The revenue, chiefly from *thathameda*, amounted in 1903–4 to 1·1 lakhs. The expenditure included Rs. 30,000 paid as tribute to the British Government, Rs. 24,000 spent on miscellaneous administrative charges, Rs. 33,500 devoted to the salaries of officials, Rs. 18,000 to the privy purse, and Rs. 4,350 to public works.

Kengtung Town.—Capital of Kengtung State in the Southern Shan States, Burma, situated in 21° 18′ N. and 99° 45′ E., towards the southern end of the central valley of the State. The town, which lies on low, undulating ground, was built early in the nineteenth century, and in 1901 had a population of 5,695. It is a straggling area, containing a few brick buildings and the Sawbwa's *haw* or palace of timber surrounded by a brick wall. Kengtung has till recently been the head-quarters of an Assistant Superintendent. It was a post of importance in the eighteenth century, and was fortified strongly by Alaungpayā with a thick wall and a moat. It is still an important trading centre. The present station of Kengtung is a quarter of a mile away, and contains the quarters of the police. The cantonment is about 7 miles west of the town. The place is very unhealthy, and a site for a new station has been found on a spur (Loi Mwe) at an altitude of 5,500 feet, 12 miles south-east of Kengtung town. There is

room here for both the civil station and the cantonment, and a good supply of drinking-water is obtainable. The garrison of Kengtung has recently been replaced by military police.

Keonjhar State.- One of the Tributary States of Orissa, Bengal, lying between 21° 1′ and 22° 10′ N. and 85° 11′ and 86° 22′ E. It is the second largest of the Orissa States, having an area of 3,096 square miles. It is bounded on the north by Singhbhūm District; on the east by the State of Mayūrbhanj and Balasore District; on the south by Cuttack District and the State of Dhenkānāl; and on the west by the States of Pāl Laharā and Bonai. Keonjhar is divided into two widely dissimilar tracts, Lower Keonjhar being a region of valleys and lowlands, while Upper Keonjhar includes the mountainous highlands. The latter consist of great clusters of rugged crags, which in troublous times afforded a safe retreat to its inhabitants. The mountain-tops appear from the lowlands to be sharply ridged or peaked, but in reality they have extensive table-lands on their summits, fit both for pasture and for tillage. The Baitaranī river takes its rise in the hilly north-western division. The principal peaks are Gandhamādan (3,479 feet), Thākurāni (3,003 feet), Tomāk (2,577 feet), and Bolat (1,818 feet).

Keonjhar originally formed part of Mayūrbhanj, but about 200 years ago the local tribes threw off their allegiance to that State and chose a brother of the Rājā as their king. Since that time thirty six chiefs have ruled. The late chief rendered good service during the Mutiny of 1857, in recognition of which his tribute was reduced and he was made a Mahārājā. He died in 1861 without legitimate issue; and on Government nominating his natural son, the present chief, to the *gaddi*, a dispute arose as to the succession, culminating in an insurrection of the Bhuiyā and Juāng tribes, which was suppressed only with the aid of British troops. The hill tribes again rebelled in 1891 as a protest against the oppressions of the minister, and the aid of British troops had again to be invoked before the rising could be put down. The State has an estimated revenue of 3 lakhs, and pays a tribute of Rs. 1,710 to the British Government. The population increased from 248,101 in 1891 to 285,758 in 1901, but is still very sparse, the density in the latter year being only 92 persons per square mile. There is one town, KEONJHAR (4,532), and 1,937 villages, of which the most important is ANANDPUR, situated on the Baitaranī river. Of the total population, 246,585 are Hindus and 38,567 Animists, the most numerous castes being Pāns (31,000), Khandaits (29,000), Gaurs (28,000), Hos (24,000), Bhuiyās (20,000), Kurmīs (17,000), Gonds (16,000), Bāthudis (13,000), and Khonds (12,000). The old Midnapore-Sambalpur road runs through Keonjhar town, and a few metalled roads have been made in the neighbourhood of the head-quarters. A new and important fair-weather road has lately been completed,

connecting Keonjhar town with Bhadrakh station in Balasore on the Bengal-Nāgpur Railway (84 miles) on the one side, and on the other with Jaintgarh on the borders of Singhbhūm District (36 miles). For administrative purposes the State is divided into subdivisions: namely, the head-quarters, Anandpur or Lower Keonjhar, and Chāmpeswar or Nuāgarh. The State maintains 3 charitable dispensaries, 2 middle English, 7 upper primary, and 84 lower primary schools.

Keonjhar Town (or Nijgarh).—Head-quarters of the Orissa Tributary State of the same name, Bengal, situated in 21° 38′ N. and 85° 36′ E., on the Midnapore-Sambalpur road. Population (1901), 4,532.

Keonthal (*Kiūnthal*).—One of the Simla Hill States, Punjab, lying between 30° 55′ and 31° 13′ N. and 77° 10′ and 77° 25′ E. The main block of territory adjoins Simla station. It has an area of 116 square miles, divided into 22 villages, and the population in 1901 was 22,499. The revenue in 1903 was estimated at Rs. 66,000. The principal products are grain and opium. The present Rājā is Bijai Sen, a Rājput by caste, who succeeded his father Balbīr Sen in 1901. The chief of Keonthal was formerly styled Rānā, but was raised by the British Government to the higher rank of Rājā in 1857. After the Gurkha War a portion of the territory of Keonthal, which had been occupied by the Gurkhas, was sold to the Mahārājā of Patiāla. In consideration of this, no tribute is paid by the Keonthal Rājā for the remainder of his State, which was restored to him by *sanad* in 1815. on the expulsion of the Gurkhas from the country. The Rājā holds another *sanad*, dated September, 1815, conferring on the Keonthal chief and his heirs for ever paramount authority over the petty states of Theog, Koti, Ghund, and Madhān, the chiefs of which, with their descendants, are bound to regard the chief of Keonthal as their liege, and to pay him tribute. Ratesh also is a fief of Keonthal. A third *sanad* was granted to the Rājā, conferring Punnar on him and his heirs. It is dated 1823, though the transfer was authorized in 1816 The reasons given for this measure were the isolated position of Pūnnar, the turbulent character of its inhabitants, the indisposition of Government to extend its territories in the hills, and a desire to benefit Keonthal.

Kerākat.—*Tahsīl* in Jaunpur District, United Provinces. *See* KIRĀKAT.

Kerala.—Ancient kingdom on the west coast of the Madras Presidency. *See* CHERA.

Kerowlee.—State and capital thereof in Rājputāna. *See* KARAULI.

Kerūr.—Village in the Bādāmi *tāluka* of Bijāpur District, Bombay, situated in 16° 1′ N. and 75° 33′ E., 11 miles north-west of Bādāmi. Population (1901), 5,353. This is a fortified place on the Sholāpur-Hubli road. The fort stands on a gentle slope about 300 yards south-

west of the village. As the village increased, a new market was built to the east of the fort, and a colony of weavers established themselves in a market to the south, where they formerly carried on a flourishing trade. The village and fort contain several temples and a large reservoir.

Kesabpur.—Village in the head-quarters subdivision of Jessore District, Bengal, situated in 22° 55′ N. and 89° 13′ E., on the Harihar river, about 18 miles south of Jessore town. It is a large centre of the sugar trade. An import trade in rice is carried on, and large quantities of earthen pots and vessels are manufactured in connexion with the sugar industry. Another local manufacture is brass-work.

Kesariyā.—Village in the head-quarters subdivision of Champāran District, Bengal, situated in 26° 21′ N. and 84° 53′ E. Population (1901), 4,466. Kesariyā contains a lofty brick mound, 1,400 feet in circumference, supporting a solid tower or *stūpa* of the same material, 62 feet high and 68 feet in diameter, which was supposed by General Cunningham to have been erected to commemorate one of the acts of Buddha. The brick tower is said to date from A.D. 200-700; but the mound is of an earlier period, being associated with the name of Rājā Ben Chakrabartti, a traditional emperor of India.

Keshorai Pātan.—Head-quarters of the *tahsīl* of the same name in the State of Būndi, Rājputāna, situated in 25° 17′ N. and 75° 57′ E., on the northern bank of the Chambal, about 12 miles below Kotah town and 22 miles south-east of Būndi town. Population (1901), 3,773. The place claims a very remote antiquity, local historians affecting to trace its traditions back to the mythological period of the Mahābhārata. In old days it was a wild jungle, known as Jambu Karan from the number of *jāmun*-trees (in Sanskrit *jambu*) and of jackals (in Sanskrit *jambuk*) found there. The original name of the town was Rantideo Pātan, after Rājā Rantideo, chief of Maheshwar and cousin of Rājā Hasti, the founder of Hastināpur. The oldest inscriptions found are in a couple of *satī* temples on the banks of the river, which are supposed to bear dates A.D. 35 and 93; it is also stated that, long before this period, one Parasrām built the Jambu Margeshwar or Keshwar temple sacred to Mahādeo. The building gradually fell into decay and was reconstructed in the time of Rāo Rājā Chhatarsāl (1631-58), to whom also is due the erection of the larger temple of Keshorai, for which the town is now famous, though the foundations were actually laid in the time of his predecessor. This temple contains an image of Keshorai, a name for Vishnu, and attracts yearly a large crowd of worshippers. It possesses no marked architectural beauties, and has been so incessantly covered with fresh coats of whitewash that it looks not unlike a huge piece of fretwork in wax or sugar which the heat or moisture has partially melted. The *tahsīl* of Pātan, one of

the most fertile in the State, was ceded to the Peshwā in the eighteenth century for assistance rendered in expelling a usurper, and was by him transferred, two-thirds to Sindhia and one-third to Holkar. Under the treaty of 1818 the portion held by Holkar was restored to Būndi, while under the treaty of 1860 with Sindhia the sovereignty of the remainder of the tract was transferred to the British Government, who made it over in perpetuity to Būndi on payment of Rs. 80,000 a year.

Kesria.—Petty State in KĀTHIĀWĀR, Bombay.

Keti (or Keti Bandar).—Port, town, and municipality in the Ghorābāri *tāluka* of Karāchi District, Sind, Bombay, situated in 24° 8′ N. and 67° 30′ E., close to the sea, on the Hajāmro branch of the Indus. Population (1901), 2,127. Keti is the chief port in the Indus delta for river and sea-going boats, and has taken the place of Ghorābāri, a little farther inland on the same branch, which was formerly the principal commercial town of the surrounding tract. In 1848 the Hajāmro capriciously receded, and Ghorābāri immediately dwindled into comparative insignificance. The trade of the deserted port then betook itself to the first Keti, nearer the sea; but about 1853 the place was swept away by a flood, and a new site was chosen in the neighbourhood. This second Keti, the existing town and harbour, now about fifty years old, soon attracted the river trade, and at present ranks next to Karāchi among the ports of Sind. Exports to the Bombay and Madras Presidencies, to Sonmiāni, and Makrān, comprise grain, pulses, oilseeds, wool, cotton, drugs, dyes, saltpetre, and firewood. Imports, from the same places and the Persian Gulf, include coco-nuts, cotton piece-goods, metals, sugar, spices, coir, and shells. The value of the sea-borne trade of Keti in 1903–4 amounted to 6·8 lakhs: exports, 5·3 lakhs; imports, 1·5 lakhs. During the prevalence of the south-west monsoon trade remains at a standstill, vessels being unable to make the harbour from seaward. In the brisk season, from 70 to 90 boats of various sizes may be seen lining the *bandar*. Sea-borne goods for transit up the Indus must here be transferred to river boats. The town has several times been in danger of floods, but, owing to its slightly elevated position, has hitherto escaped the fate of its predecessor. It communicates by road with Tatta 60 miles south-west; with Mirpur Sakro, 36 miles south-west; and with Ghorābāri, 13 miles. The municipality was established in 1854, and had an average income during the decade ending 1901 of Rs. 6,400. In 1903–4 the income was Rs. 6,100. The town contains a dispensary, and one school for boys, with an average daily attendance of 88 pupils.

Keunjhar.—Native State and town in Orissa, Bengal. *See* KEONJHAR.

Khāchrod (*Khāchraud*).—Town in the Ujjain district of Gwalior State, Central India, situated in 23° 26′ N. and 75° 20′ E., on the

Ratlām-Godhra branch of the Bombay, Baroda, and Central India Railway, 1,700 feet above sea-level. Population (1901), 9,186. The town is mentioned in the *Ain-i-Akbarī* as the head-quarters of a *mahāl* in the Ujjain *sarkār* of the *Sūbah* of Mālwā. It is a place of increasing commercial importance owing to the opening of the railway, and will be still further benefited by the extension of the line to Muttra, now under construction. It is famous for its painted woodwork and tobacco. A school, a post office, and an inspection bungalow are situated in the town.

Khadāl.—Petty State in MAHĪ KĀNTHA, Bombay.

Khadki.—Town in the Haveli *tāluka* of Poona District, Bombay. *See* KIRKEE.

Khāgā.—Eastern *tahsīl* of Fatehpur District, United Provinces, comprising the *parganas* of Dhāta, Ekdālā, Hathgaon, and Kutila, and lying between 25° 26′ and 26° 1′ N. and 81 0′ and 81° 20′ E., with an area of 481 square miles. Population fell slightly from 224,605 in 1891 to 224,348 in 1901. There are 493 villages and one town, Kishanpur (population, 2,354). The demand for land revenue in 1903–4 was Rs. 3,80,000, and for cesses Rs. 61,000. The density of population, 466 persons per square mile, is above the District average. North and south the *tahsīl* is bounded by the Ganges and Jumna, while the centre is drained by a shallow channel called the Sasur Khaderī. Near the Ganges the soil is sandy, while towards the Jumna ravines and poor soil retard cultivation. The central portions are, however, fertile. In 1903–4 the area under cultivation was 269 square miles, of which 112 were irrigated. Wells supply more than half, and tanks or *jhīls* are the next most important source. The Fatehpur branch of the Lower Ganges Canal, which was opened in 1898, is extending its operations.

Khāgān.—Mountain valley in Hazāra District, North-West Frontier Province. *See* KĀGAN.

Khagariā.—Town in the head-quarters subdivision of Monghyr District, Bengal, situated in 25° 30′ N. and 86° 29′ E., on the Gandak. Population (1901), 11,492. Khagariā is a station on the Bengal and North-Western Railway and possesses a large trade.

Khagaul.—Town in the Dinapore subdivision of Patna District, Bengal, situated in 25° 35′ N. and 85° 3′ E., a short distance to the south of Dinapore. Population (1901), 8,126. The Dinapore railway station is just outside the town, which has only grown into importance since the opening of the railway. It is the head-quarters of a company of East Indian Railway volunteers.

Khaibar.—Historic pass leading from Peshāwar District in the North West Frontier Province into Afghānistān. *See* KHYBER.

Khair.—North-western *tahsīl* of Alīgarh District, United Provinces, comprising the *parganas* of Khair, Chandaus, and Tappal, and lying

between 27° 51′ and 28° 11′ N. and 77° 29′ and 78° 1′ E., with an area of 407 square miles. The population rose from 150,656 in 1891 to 178,867 in 1901. There are 272 villages and three towns, none of which has as many as 5,000 inhabitants; Khair, the *tahsīl* head-quarters, has a population of 4,537. The density, 439 persons per square mile, is much below the District average. The demand for land revenue in 1903–4 was Rs. 4,11,000, and for cesses Rs. 66,000. The *tahsīl* is bounded on the west by the Jumna, and has a considerable area of *khādar* land in which nothing grows but coarse grass and tamarisk, the haunt of innumerable wild hog. Large herds of cattle are grazed by the Gūjar inhabitants of this tract, who are inveterate cattle-thieves. The Māt branch of the Upper Ganges Canal provides irrigation. In 1903–4 the area under cultivation was 292 square miles, of which 119 were irrigated.

Khairābād.—Town in the District and *tahsīl* of Sītāpur, United Provinces, situated in 27° 32′ N. and 80° 46′ E., on the Lucknow-Bareilly State Railway. Population (1901), 13,774. It was formerly a place of importance, and is said to have been founded by one Khairā, a Pāsī, in the eleventh century. It is, however, more probable that the name was given by Muhammadans to an older town on the same site; and it has been identified with Masachhatra, an ancient holy place. A governor was stationed here by the early kings of Delhi, and under Akbar it was the capital of a *sarkār*. During the first half of the nineteenth century Khairābād was the head-quarters of an Oudh *nizāmat*; and after annexation a Division took its name from the town, though the head-quarters of the Commissioner were at Sītāpur. A number of temples and mosques are situated here, some of them dating from the reign of Akbar, but none is of much interest. Khairābād contains a branch of the American Methodist Mission. It has been a municipality since 1869. During the ten years ending 1901 the income and expenditure averaged Rs. 7,500. In 1903–4 the income was Rs. 9,100, chiefly from octroi (Rs. 5,300); and the expenditure was Rs. 12,300. Trade has suffered owing to the rise in importance of Sītāpur; but there is a daily market, and a small industry in cotton-printing survives. A large fair is held in January. There are five schools, including two for girls, with about 300 pupils; and two dispensaries.

Khaira Gali.—Small cantonment in Hazāra District, North-West Frontier Province, situated in 33° 55′ N. and 73° 20′ E., on the road between Abbottābād and Murree. During the summer months it is occupied by one of the British mountain batteries which are stationed at Rāwalpindi in the winter.

Khairāgarh State.—Feudatory State in the Central Provinces, lying between 21° 4′ and 21° 34′ N. and 80° 27′ and 81° 12′ E., with

an area of 931 square miles. The State consists of three separate sections, and is situated on the western border of Drug District, with which, and with the States of Chhuīkhadān, Kawardhā, and Nāndgaon, its boundaries interlace. Of these three sections, the small *pargana* of Khulwā to the north-west was the original domain of the chiefs of Khairāgarh; Khamariā on the north-east was seized from the Kawardhā State at the end of the eighteenth century in lieu of a small loan; while of the main area of the estate in the south, the Khairāgarh tract was received at an early date from the Mandlā Rājās, and that of Dongargarh represents half the estate of a *zamīndār* who rebelled against the Marāthās, and whose territory, when the rebellion was crushed by the chiefs of Khairāgarh and Nāndgaon, was divided between them. The head-quarters are at Khairāgarh, a village of 4,656 inhabitants, situated 23 miles from both the Dongargarh and Rāj-Nāndgaon stations on the Bengal-Nāgpur Railway. The western tracts of the State are hilly, but those to the east lie in a level black-soil plain of great fertility. The ruling family are considered to be Nāgvansi Rājputs, and to be connected with the house of Chotā Nāgpur. Their pedigree dates back to A.D. 740. The present chief, Kamal Nārāyan Singh, was installed in 1890 at the age of twenty-three years, and the hereditary title of Rājā was conferred on him in 1898. He conducts the administration of the State with the advice of a Dīwān appointed by Government, under the supervision of the Political Agent for the Chhattīsgarh Feudatory States. The population in 1901 was 137,554, showing a decrease of 24 per cent. in the previous decade, during which the State was severely affected by famine There are 497 inhabited villages, and one town, DONGARGARH (population, 5,856). The density of population is 147 persons per square mile. Gonds, Lodhīs, Chamārs, and Ahirs are the most important castes numerically; the people belong almost entirely to Chhattīsgarh, and the local dialect of Eastern Hindī named after that tract is universally spoken.

The eastern part of the State is a fertile expanse of black soil, while in the west the land is light and sandy. In 1904 nearly 543 square miles, or 58 per cent. of the total area, were occupied for cultivation, and nearly 486 square miles were under crop. *Kodon* covers 41 per cent. of the cropped area, rice 21 per cent., and wheat 22 per cent. The cultivated area has decreased by about 70 square miles since 1894. There are 224 irrigation tanks, by which about 3,000 acres are protected. About 165 square miles are covered with forest, the principal species being teak, *bījāsāl* (*Pterocarpus Marsupium*), and bamboos. Brass vessels and wooden furniture are made at Khairāgarh town, and carpets of a good quality are produced in the jail. The rolling of native cigarettes gives employment to a considerable number of persons. The Bengal-Nāgpur Railway passes through the south of the

State, with the stations of Bortalao, Dongargarh, and Musra within its limits. About 63 miles of embanked and 57 miles of unembanked roads have been constructed, the most important being those from Dongargarh through Khairāgarh to Kawardhā, and from Khairāgarh to Rāj-Nāndgaon. Exports of produce are taken to Rāj-Nāndgaon and Dongargarh railway stations.

The total revenue of the State in 1904 was Rs. 3,03,000, Rs. 1,84,000 being realized from land revenue, Rs. 29,000 from forests, and Rs. 21,000 from excise. The incidence of land revenue is R. 0–10–5 per occupied acre. A regular cadastral survey has been carried out, and the method of assessment is that prescribed for British Districts. The revenue is settled with the headmen of villages, who are allowed a commission of 20 or 30 per cent. of the 'assets,' but have no proprietary rights. The rents of the cultivators are also fixed at settlement. The expenditure in 1904 was Rs. 3,18,000, the principal items being Government tribute (Rs. 70,000), private expenses of the ruling family (Rs. 90,000), general administration (Rs. 21,000), public works (Rs. 20,000), education (Rs. 9,000), and medical relief (Rs. 4,000). Some arrears of tribute and Government loans were also repaid in that year. In respect of tribute Khairāgarh was treated by the Marāthās as an ordinary estate, and the revenue was periodically raised on a scrutiny of the 'assets.' It is now fixed by Government for a term of years. During the twelve years ending 1905 nearly 3·84 lakhs has been expended on the improvement of communications and the erection of public buildings. The State maintains 26 schools, including a high school at Khairāgarh, middle schools at Khairāgarh, Dongargarh, and Khamariā, and a girls' school at Dongargarh, with a total of 1,931 pupils. At the Census of 1901 the number of persons returned as able to read and write was 2,064, the proportion of male literates being 2·9 per cent. of the population. Dispensaries are maintained at Khairāgarh town and Dongargarh, in which 12,000 persons were treated in 1904.

Khairāgarh Tahsīl.—South-western *tahsīl* of Agra District, United Provinces, conterminous with the *pargana* of the same name, lying between 26° 45′ and 27° 4′ N. and 77° 26′ and 78° 7′ E., with an area of 309 square miles. Population increased from 123,893 in 1891 to 127,692 in 1901. There are 155 villages and one town, Jagnair (population, 4,051). Khairāgarh, the *tahsīl* head-quarters, is a small village. The demand for land revenue in 1903–4 was Rs. 2,85,000, and for cesses Rs. 35,000. The density of population, 413 persons per square mile, is much below the District average. The *tahsīl* is divided into two portions by the Utangan. The tract south-west of that river is a spur of British territory almost surrounded by the Native States of Bharatpur and Dholpur, with a range of the Vindhyas along the northern boundary and isolated hills scattered farther south.

These hills are of red sandstone, which is valuable for building purposes. Near the hills the soil is sandy, but after passing a tract of infertile clay a richer soil is reached. East of the Utangan the ordinary loam is found, stretching up to the Khārī Nadī, which forms the eastern boundary of the *tahsīl* and is bordered by deep and precipitous ravines. There is no canal-irrigation, and in 1903–4 the irrigated area was only 34 square miles out of 206 under cultivation. Wells are the sole source of supply, but owing to the faulty substrata they cannot be made in many places.

Khairi-Mūrat.—Mountain range in the Fatahjang *tahsīl* of Attock District, Punjab, midway between the Sohān river and the Kālā-Chitta range. It rises about 30 miles from the Indus, and runs eastward for about 24 miles, a barren ridge of limestone and sandstone rock, extending from 72° 37′ to 72° 56′ E. and from 33° 25′ to 33° 30′ N. North of the range lies a plateau intersected by ravines; while southward a waste of gorges and hillocks extends in a belt for a distance of 5 miles, till it dips into the fertile valley of the Sohān, one of the richest tracts in Rāwalpindi District. The Khairi-Mūrat was formerly covered with jungle; but it is now completely destitute of vegetation, except where the hill has been formed into a 'reserved' forest and closed to grazing. In these parts the trees are rapidly springing up again. The hills run nearly parallel to the Kālā-Chitta, about 10 miles to the south. The formation is chiefly limestone, edged with sandstone and earthy rocks whose vertical and contorted strata indicate intense disturbance. The southern portion of the range is extremely dreary, being formed of rocky ravines and stony hillocks, gradually sinking into the fertile valley of the Sohān.

Khairpur State.—State in Sind, Bombay, lying between 26° 10′ and 27° 46′ N. and between 68° 20′ and 70° 14′ E., with an area of 6,050 square miles. It is bounded on the north by Sukkur District; on the east by Jaisalmer State in Rājputāna; on the south by Hyderābād and Thar and Pārkar Districts; and on the west by the river Indus. Its greatest length from east to west is about 120 miles, and its breadth from north to south about 70 miles.

Physical aspects.

Like other parts of Sind, Khairpur consists of a great alluvial plain, the part bordering directly upon the Indus being very rich and fertile, though much of it is used as *mohāris* or hunting-grounds. With the exception of the fertile strip watered by the Indus and its canals, and of a narrow strip irrigated by the Eastern Nāra, the remainder or three-fourths of the whole area is a continuous series of sandhill ridges covered with a stunted brushwood, where cultivation is altogether impossible. The country generally is exceedingly arid, sterile, and desolate in aspect. In the northern portion of the State is a small

ridge of limestone hills, being a continuation of the low range known as the Ghar, which runs southward from Rohri for a distance of about 40 miles. On a western outlying spur of this ridge is situated the fort of Diji.

The State of Khairpur is mostly occupied by Indus alluvium and desert formations. The Kīrthar limestone (middle eocene) forms a range of hills in the north-eastern portion, between the Mīr Wah and the Nāra river. On the top of the range are found oyster, cockle, and numerous other kinds of marine shells.

The trees and shrubs are identical with those found in Sukkur District, and good timber is to be met with in different game preserves bordering on the Indus. The *kandi*-tree grows luxuriantly in the valleys, and the *tāli* is largely grown by cultivators.

The wild animals found in Khairpur include the hyena, wolf, jackal, fox, wild hog, deer, gazelle, and antelope. The birds and water-fowl are those common to Sind generally, such as bustard, wild geese, snipe, partridges (both black and grey), and various kinds of wild duck (which arrive in the cold season). Snakes abound, as in other parts of Sind.

The climate of Khairpur is agreeable during four months of the year, when the minimum temperature falls to 40°, but is fiercely hot during the remaining eight, when the maximum rises to 113°. The rainfall is slight, but dust-storms are frequent and have the effect of cooling the atmosphere to some extent.

History.

The present chief of Khairpur belongs to a Baloch family called Talpur; and, previous to the accession of this family, on the fall of the Kalhora dynasty of Sind in 1783, the history of Khairpur belongs to the general history of SIND. In that year Mīr Fateh Alī Khān Tālpur established himself as Rais or ruler of Sind; and subsequently his nephew, Mīr Sohrāb Khān Tālpur, founded the Khairpur branch of the Tālpur family. The dominions of Mīr Sohrāb Khān were at first confined to the town of Khairpur and a small adjacent tract of country, but by conquest and intrigue he managed to enlarge them, until they extended to Sabzalkot and Kashmor on the north, to the Jaisalmer desert on the east, and to the borders of Cutch Gandāva on the west. About the year 1813, during the troubles in Kābul incidental to the establishment of the Bārakzai dynasty, the Mīrs were able to withhold the tribute which up to that date had been somewhat irregularly paid to the rulers of Afghānistān. Two years earlier, in 1811, Mīr Sohrāb had abdicated in favour of his son Mīr Rustam. But he appears to have endeavoured to modify this arrangement subsequently; and ultimately the jealousy between the two brothers, Mīr Rustam and Alī Murād, was one of the factors in the crisis that caused the intervention of the British power.

In 1832 the individuality of the Khairpur State, as separate from the other Tālpur Mīrs in Sind, was recognized by the British Government in a treaty, under which the use of the river Indus and the roads of Sind were secured to the British. When the first Kābul expedition was decided on, the Sind Mīrs were required to assist the passage of the British through their territories, and allow of the occupation of Shikārpur. Most of the princes showed great disinclination to comply with these demands. But in Khairpur, Alī Murād, who gradually succeeded in establishing his hold on the *rāisat*, or chiefship, cordially supported the British policy; and the result was that, after the battles of Miāni and Daba had put the whole of Sind at the disposal of the British Government, Khairpur was the only State that was allowed to retain its political existence under the protection of the paramount power. In 1866 a *sanad* was granted to the Mīr, under which the British Government promised to recognize any succession to the chiefship that might be in accordance with Muhammadan law. Mīr Alī Murād died in 1894, and was succeeded by his son Mīr Faiz Muhammad Khān, who is entitled to a personal salute of 17 guns. The ordinary salute is 15 guns.

Population.

The State contains one town and 153 villages. The population was: (1872) 126,962, (1881) 125,919, (1891) 128,611, and (1901) 199,313. The density is 33 persons per square mile. Distributed by religion, there are 35,000 Hindus and 163,000 Muhammadans. The Hindus are almost entirely Lohānas (33,000), traders and clerks. Among the Muhammadans of foreign extraction, Arabs number 12,000; Baluchīs, chiefly of the Rind, Burdi, Chandia, Dombki, Jatoi, and Marri tribes, 24,000; Jats, 4,000; and the fishermen or Mohānos, 5,700. Sindīs include 12,000 Sūmras, 58,000 Sammās, and 41,000 returned as Sindīs unspecified. Agriculture supports 69 per cent. of the total population. About 95 per cent. of the Muhammadan males and about one-fourth of the Hindus follow agricultural pursuits. The rest are engaged in trade and other callings. Sindī, Persian, Siraikī, and Baluchī are the languages chiefly spoken.

Agriculture.

The soil of Khairpur, especially in the strip adjoining the Indus, is very productive. The tract lying between the Mīr Wah Canal and the Indus is the richest part of the State, but cultivation even there is by no means so extensive as it might be, though of late years the area under tillage has greatly increased. The area of cultivable land in 1903-4 was 1,350 square miles, and fallow lands covered 1,226 square miles. The principal crops are *jowār*, *bājra*, wheat, gram, various pulses, and cotton. Indigo is also cultivated, but the area is decreasing. The fruit trees are the mango, mulberry, apple, pomegranate, date, &c.

ntly cultivation has been greatly extended, owing to the con-tion of new canals and the improvement of old ones. Advances made to agriculturists, free of interest.

The domestic animals comprise the camel, horse, buffalo, bullock, p, donkey, and mule. The State maintains both horse and donkey tions for breeding purposes.

Cultivation is dependent on irrigation from the Indus river by als. The largest and most important of these is the Mir Wah, ex-ated by Mīr Sohrāb, with its feeder the Sathio Wah. The latter, the Abdul Wah, was excavated in the time of Mīr Alī Murād. the rule of the present Mīr a canal department has been formed and the following important branch canals excavated: Faiz Wah, Faiz Bakhsh, Faiz Ganj, Faiz Bahar, and Faiz Manj. The Sathio has been improved, so as to ensure a supply at all seasons. Forced labour in the clearance of canals is now entirely abolished. The Eastern Nāra flows through the desert along an abandoned course of the river, and there is a small area of cultivation along it. The area irrigated by the State canals in 1903–4 was 246 square miles. About 20 square miles of land were supplied from wells and tanks in the same year.

The State possesses 331 square miles of forests, of which 200 square miles are reserved for game by the Mīr. They are in charge of a Forest officer, appointed by the State, and a small staff. The forest trees are the *tāli*, *bahān*, *babūl*, and *kandi*. The bush jungle consists principally of tamarisk; reed grasses are abundant. The game preserves bordering on the Indus supply good timber. The valleys produce fair *kandi* wood. In 1903–4 the revenue from forests amounted to Rs. 26,000.

In the desert portion of Khairpur are pits of natron—an impure sesquicarbonate of sodium, always containing sulphate and chloride of sodium. It is generally obtained by means of evaporation. The natron pits are a source of income to the Mīr, yielding about Rs. 25,000.

Trade and communications.

The manufactures comprise cotton fabrics, such as woven sheets and coloured cloth, silk fabrics, silver-ware of different kinds, lacquered woodwork, boots, shoes, horse-trappings, swords, matchlocks, and earthen pottery for local use. Gambat is noted for bed sheets called *khais*, and Khairpur for cloth-dyeing. Khairpur town possesses one carpet factory, attached to an industrial school.

The trade of the State resembles that of the adjoining British towns and villages—the chief exports being cotton, wool, grain, indigo, hand-made cloth, hides, tobacco, &c. The only product which is peculiar to Khairpur and is not common to the surrounding British

territory—the Thar and Pārkar District excepted—is carbonate of soda, which is chiefly bought by Bombay merchants. The value of the articles annually exported from Khairpur to British Sind and the Native State of Jaisalmer has been approximately estimated at about 6 lakhs, and that of the imported articles at somewhat more than 6 lakhs. Of the annual fairs, that of Rānipur, 45 miles from Rohri, is the most important.

The railway from Hyderābād to Rohri runs through the whole length of the State. In addition to the main trunk road between the same towns, which passes through Khairpur at a distance of about 20 miles from the Indus, and another road connecting them by a somewhat more direct route, there are several roads connecting *tāluka* head-quarters with Khairpur town and Kot Diji. Ten post offices are maintained in the State. There are six ferries, chiefly on the Indus.

Administration.

The rule of the Mīr is patriarchal, but many changes have been made introducing greater regularity of procedure into the administration. The State is divided into five *tālukas*, each under a *mukhtiarkār*. These are: Khairpur and Gambat (forming the Khairpur subdivision), Mīr Wah, Faiz Ganj, and Nāro (forming the Mīr Wah subdivision). Each subdivision is under a *naib-wazīr*. The Wazīr, an officer lent from British service, conducts the administration under the Mīr. The Collector of Sukkur is *ex officio* Political Agent for the State. The Mīr himself exercises the powers of a High Court, but cannot try British subjects for capital offences without the Political Agent's permission. The Wazīr is District Magistrate and District and Sessions Judge. The *naib-wazīrs* are subdivisional magistrates and first-class sub-judges, and criminal and civil powers are also exercised by the *mukhtiārkārs*, as well as by two near relatives of the chief. The Indian Penal Code and the Criminal Procedure Code have been adopted. There is also a Court of Elders on the lines of the British Frontier Tribes Act. Steps have recently been taken to remedy the indebtedness of the agriculturists by the introduction of a Relief Act. Civil cases are largely decided by arbitrators, but a more fixed procedure is being introduced. In 1903–4, 765 offences were reported to the police, mostly grievous hurt and thefts of cattle and property.

The revenue is collected almost entirely in kind according to the primitive *batai* system, the Mīr receiving a third of the produce of the land, which yields on an average Rs. 58 per acre of cultivation. The gross revenue, which amounted in 1882–3 to 5·7 lakhs, had increased by 1902–3 to 13 lakhs. In 1903–4 the gross receipts amounted to only 8·3 lakhs, the decrease being due to large stocks of grain remaining unsold, untimely rain, and the presence of locusts. Of the total receipts, which average about 13 lakhs, about Rs. 1,85,000

represents the share of *jāgīrdārs* and other alienees. The former are chiefly the Mīr's sons and the ladies of his family. The gross receipts in 1903–4 included land revenue 6 lakhs, excise about Rs. 90,000, miscellaneous taxes Rs. 58,000, and forests Rs. 26,000. The land revenue amounts on the average to 10 lakhs a year; but as it is chiefly paid in kind, considerable fluctuations occur in accordance with the character of the harvest. The total expenditure in 1903–4 was 11·6 lakhs, of which more than 2 lakhs was spent on public works, such as canals, buildings, roads, bridges, wells, and tanks. Until the end of 1902 coins of local issue were current in the State, but they have now been replaced by the British silver currency. No tribute is payable by the Mīr.

No salt is manufactured, the British Government supplying it at a reduced rate. Poppy is cultivated sufficient to meet the demand for local consumption. Liquor is manufactured, but may not be taken into British territory.

The military force consists of 377 men, of whom 163 are mounted. The total strength of the police, including officers, in 1903–4 was 220, and a preventive service to check opium smuggling from Jaisalmer State has recently been organized. The Central jail is situated at Kot Diji, and a sub-jail at Khairpur. The daily jail population in 1903–4 averaged 214.

Though recent years have shown some progress, Khairpur is very backward in education. In 1881 there were 6 schools in the State, with an attendance of 2,387 pupils. In 1903–4 the number of schools was 95, attended by 4,586 pupils, of whom 387 were girls. Of the total number of pupils, 4,242 were in primary, 83 in secondary schools, and the remainder in an industrial school. Persian is taught by *mullās*, who receive one pice weekly from the parents of each child. At the industrial school, carpentry, smith-craft, embroidery, turnery, carpet-making, and tailoring are taught.

The State possesses 3 hospitals and 3 dispensaries. In 1903–4 the number of cases treated was 160,640, of whom 1,292 were in-patients; and the expenditure was Rs. 19,678. About 6,200 persons were vaccinated in the same year.

[A. M. Hughes, *Sind Gazetteer* (1876); E. A. Langley, *Narrative of a Residence at the Court of Mīr Alī Murād*, 2 vols. (1860); C. M. Aitchison. *Treaties, Engagements, and Sanads.*]

Khairpur Town (1).—Capital of the State of Khairpur, Sind, Bombay, situated in 27° 31′ N. and 68° 48′ E., on the Mīr Wah canal, about 15 miles east of the Indus, and 17 miles south of Rohri. The nearest railway station on the Kotri-Rohri section of the North-Western Railway is Khairpur Mīr, situated about 2 miles to the south-east of the town. Population (1901), 14,014, mainly Musalmāns. The

town, which is irregularly built, consists of a collection of mud hovels, intermingled with a few houses of a better class. The palace is seldom used by the ruler, who lives at Kot Diji, but there is a handsome guest-house. Outside the town stand the tombs of three Muhammadan saints—Pīr Ruhan, Ziā-ud-dīn, and Hājī Jafar Shāhid. The town contains two hospitals, one of which is for women.

During the flourishing period of the Tālpur dynasty, Khairpur is said to have possessed not less than 15,000 inhabitants, but the place has decreased in importance since the conquest of Sind. The manufactures comprise the weaving and dyeing of cloths of various kinds, goldsmith's work, and the making of firearms, swords, &c. A carpet factory has recently been opened, the workers being under instruction by a teacher brought from the Punjab. The trade is principally in indigo, grain, and oilseeds, which form the chief articles of export; the imports are piece-goods, silk, cotton, wool, metals, &c. On the present site of the town, which owes its rise to Mīr Sohrāb Khān Tālpur, there stood, prior to the year 1787, the village of Boira and the *zamīndāri* or estate of the Phulpotras. It was selected as the residence of the chief Mīrs of Northern Sind; and for some time during Tālpur rule a British Resident was stationed here, in terms of the treaty of April 20, 1838, concluded between the British Government and the Mīrs of Sind.

[E. A. Langley, *Narrative of a Residence at the Court of Mīr Alī Murād*, 2 vols. (1860).]

Khairpur Tahsīl.—*Tahsīl* in the Minchinābād *nizāmat*, Bahāwalpur State, Punjab, lying on the left bank of the Sutlej, between 28° 49′ and 30° N. and 72° 7′ and 73° 18′ E., with an area of 2,300 square miles. The population in 1901 was 81,871, compared with 74,732 in 1891. It contains the towns of KHAIRPUR (population, 5,013), the head-quarters, and Hāsilpur, which was created a municipality in 1902: and 199 villages. The Hakra depression passes through the southern portion of the *tahsīl*, the remainder of which is divided between the central uplands and the riverain tract along the Sutlej. The land revenue and cesses in 1905–6 amounted to 2·2 lakhs.

Khairpur Town (2).—Head-quarters of the *tahsīl* of the same name in Bahāwalpur State, Punjab, situated in 29° 35′ N. and 72° 18′ E., 38 miles north-east of Bahāwalpur town on the Southern Punjab Railway. Population (1901), 5,013. It is a decaying town, as the sand from the desert of Cholistān has for years been encroaching on it, but contains a school and a dispensary. The municipality had an income in 1903-4 of Rs. 6,200, chiefly from octroi.

Khairpur (3).—Town in the Alīpur *tahsīl* of Muzaffargarh District, Punjab, situated in 29° 20′ N. and 70° 49′ E., 57 miles south of Muzaffargarh town, close to the junction of the Indus and Chenāb. Population (1901), 2,257. It was founded early in the nineteenth

century by Khair Shāh, a Bukhārī Saiyid, from whom it takes its name. The town lies low, and is protected from inundation by an embankment built at considerable cost and 5 miles in circumference. The municipality was created in 1873. The income during the ten years ending 1902-3 averaged Rs. 3,100, and the expenditure Rs. 3,300. In 1903-4 the income was Rs. 2,300, chiefly from octroi; and the expenditure was Rs. 2,800. The inhabitants are enterprising traders, and their trade with Sukkur (Sind), Multān, and other places at a distance is larger than that of any other town in the District. The exports consist principally of wool, cotton, and grain; the imports, of cloth and sundries.

Khajrāho.—Village in Chhatarpur State, Central India, famous for its magnificent collection of mediaeval temples, and situated in 24° 51′ N. and 79° 56′ E., 25 miles from the town of Chhatarpur. Population (1901), 1,242.

The old name as given in inscriptions was Khajjūravāhaka. By the bard Chand it is called Khajurapura or Khajjinpura. Tradition ascribes the origin of the name to two golden *khajur*-trees (date-palms) with which the city gates were ornamented, but it was more probably due to the prevalence of this tree in the neighbourhood. The place was in early days of some importance, being the capital of the kingdom of Jijhoti, which practically corresponded with modern Bundelkhand.

The earliest supposed reference to Khajrāho is in the account of the travels of Hiuen Tsiang, who visited the country of Chi-ki-to, which has been identified with Jijhoti. The Chinese pilgrim does not mention any chief town by name, but notes that there were in the country a number of *sanghārāmas* (monasteries) with but few priests, and also about ten temples.

There are no Buddhist remains on the spot, except a colossal Buddha inscribed with the usual creed in characters of the seventh or eighth century. Abu Rihān, who accompanied Mahmūd of Ghazni in his campaign against Kālinjar in 1021, notices 'Kajurāha' as the capital of Jijhoti. Ibn Batūta, who visited the place about 1335, calls it 'Kajurā,' and describes the lake, about a mile long, round which there were idol temples frequented by a tribe of *jogīs*, with long and matted hair, to whom even Muhammadans resorted in order to learn magic. The place must, therefore, at this time have still been in the possession of the Hindus, and important as a religious centre. It seems probable that the partial demolition of its temples and consequent loss of importance dates from 1494-5, when Sikandar Lodī, after his expedition into Panna and Baghelkhand, retreated through this region and sacked the country as far as Bāndā.

Its present importance lies solely in its magnificent series of temples, which, with two exceptions, were all built between 950 and 1050.

The epigraphical records contained in them are of great historical value.

The temples fall into three main groups: the western, northern, and south-eastern, each group containing a principal shrine or cathedral and several smaller temples. The western group consists entirely of Brāhmanical temples, both Saiva and Vaishnava. The northern group contains one large and some small temples, all Vaishnava, and several heaps of ruins. The south-eastern group consists entirely of Jain temples. All the temples, with the exception of the Chaunsat Joginī and Ghantai, are constructed of sandstone, and are in the same style. Even the Jain temples in the south-eastern group show none of the peculiarities commonly found in the temples of this religion, and externally they are similar in appearance to the Hindu edifices. The spire is here of more importance than the porch, there are no court-yards with circumambient cells, and no prominent domes.

The oldest temple in the western group is that known as the Chaunsat Joginī. All that now remains is a celled courtyard, the cells being of very simple design. Fergusson was of opinion that there had originally been a central shrine of wood which has disappeared. Unlike the other temples, this is built entirely of gneiss. It is assigned to the end of the eighth or early part of the ninth century. Of the remaining temples, the Kandarya Mahādeo is by far the finest. Its construction is curious, as the sanctuary does not occupy the full breadth of the building, a passage being left round the sanctuary for the circumambulation of the image, and the outer wall pierced by three porticoes to admit light to the passage. This gives the temple the unusual form of a double instead of a single cross. The carving is exceedingly rich and covers every available inch of space, but many of the figures are highly indecent, not a usual defect in Saiva temples. The other large temple in this group is the Rāmachandra or Lakshmanjī, dedicated to Vishnu, which in plan and decoration is similar to the Kandarya Mahādeo. It contains an inscription of the Chandel dynasty, dated in 954. The Vishvanāth temple, also in this group, contains Chandel inscriptions of 1001 and 1117, and one of a feudatory, dated 1000.

The northern group includes one large temple dedicated to the Vāmana or dwarf incarnation of Vishnu. It is, however, very inferior in decoration to the best in the western group, and the remaining temples in this group are small. The heaps of ruins or mounds in this portion, which General Cunningham considered to be the remains of the *sanghārāmas* mentioned by Hiuen Tsiang, are situated near the large temple.

The south-eastern group contains Jain remains only. The oldest temple in this group is the Ghantai, now a mere skeleton, consisting of

a set of exquisitely delicate pillars still bearing the architraves. The pillars are of sandstone, but the walls were of gneiss and quite plain. The remains of this temple, which is assigned to the sixth or seventh century, are very similar to those at GYĀRASPUR. The cathedral of this group is the temple to Jīnanāth. Its design is unusual, consisting of a simple oblong with an open pillared vestibule and sanctuary, and the interior decoration is very fine. A Chandel inscription of 954 exists in it.

On the Kurār Nālā, not far from the village of Khajrāho, stands the magnificent temple known as the Kunwar Nāth, which, though inferior in size to some of those in the three groups, is quite equal to them in design and the profuseness of its decoration. At the village of Jatkāri, 1½ miles away, stands another temple which is traditionally said to have been built by Sujā, sister of the famous Banāphar hero, Alhā, who figures so prominently in popular traditions of the wars between the Chandels and Prithwī Rāj of Delhi.

[A. Cunningham, *Archaeological Survey Reports*, vol. ii, p. 412; vol. vii, p. 5; vol. x, p. 16; vol. xxi, p. 55; *Epigraphia Indica*, vol. i, p. 121; *Archaeological Survey of Western India Progress Report to June*, 1904.]

Khajuhā Tahsīl.—Western *tahsīl* of Fatehpur District, United Provinces, comprising the *parganas* of Bindkī, Korā, Kutia Gunīr, and Tappa Jār, and lying between 25° 51′ and 26° 16′ N. and 80° 14′ and 80° 47′ E., with an area of 504 square miles. Population fell from 206,711 in 1891 to 199,223 in 1901, the rate of decrease being the highest in the District. There are 385 villages and three towns, the largest being BINDKĪ (population, 7,782). KHAJUHĀ, the *tahsīl* headquarters, has a population of 2,944. The demand for land revenue in 1903-4 was Rs. 4,42,000, and for cesses Rs. 71,000. The density of population, 395 persons per square mile, is below the District average. The *tahsīl* extends from the Jumna to the Ganges, and is crossed by the Rind. A considerable area is covered by the ravines of the Jumna and Rind, which are absolutely waste, though they provide grazing for herds of cattle. In 1903-4 the area under cultivation was 276 square miles, of which 87 were irrigated. The Fatehpur branch of the Lower Ganges Canal at present serves about one-third of the irrigated area, but is likely to take a larger share. Wells supply most of the remainder.

Khajuhā Town.—Head-quarters of the *tahsīl* of the same name in Fatehpur District, United Provinces, situated in 26° 3′ N. and 80° 32′ E., on the old Mughal road from Agra to Allahābād, 21 miles west of Fatehpur town. Population (1901), 2,944. A town was founded in the village of Khajuhā by Aurangzeb to commemorate his victory over Shujā in 1659, and was called Aurangābād, but the old name has survived the new. The *sarai* and *bāradarī*, built at the same time, are

fine buildings which have been restored. In 1712 Farrukhsiyar defeated his cousin, Azz-ud-dīn, near here, and proceeded on his victorious march to Delhi. The town is administered under Act XX of 1856, with an income of about Rs. 600. The trade of the place has largely been diverted to Bindkī; but brass vessels are still made in some quantities, and the playing-cards made here have some reputation. There is a school with 50 pupils.

Khajurī.—*Thakurāt* in the BHOPĀL AGENCY, Central India.

Khalīlābād.—South-eastern *tahsīl* of Bastī District, United Provinces, comprising the *parganas* of Maghar (East) and Mahūlī (East), and lying between 26° 25′ and 27° 5′ N. and 82° 50′ and 83° 13′ E., with an area of 564 square miles. Population increased from 380,486 in 1891 to 394,675 in 1901. There are 1,388 villages and only one town, MEHNDĀWAL (population, 10,143). The demand for land revenue in 1903–4 was Rs. 3,75,000, and for cesses Rs. 70,000. The density of population, 700 persons per square mile, is above the District average. The *tahsīl* lies entirely in the fertile upland tract which extends northwards from the Gogra. It is crossed by the Kuwānā, Amī, and several smaller streams. The area under cultivation in 1903–4 was 394 square miles, of which 234 were irrigated. Tanks and swamps supply more than half the irrigated area, and wells about one-third.

Khambhāliya.—Fortified town in the State of Navānagar, Kāthiāwār, Bombay, situated in 22° 12′ N. and 69° 50′ E., at the confluence of two small streams, the Teli and Ghi, flowing into the Salāya creek, about 10 miles east of the port of Salāya. Population (1901), 9,182. After Navānagar, it is the most important town in the State. It was formerly a possession of the Vādhels, from whom it was conquered by Jām Rāwal, and was the residence of the Jām or chief until the death of the emperor Aurangzeb. It contains several old temples. The ironsmiths of the town are renowned for their skill, and the gunsmiths are capable of making breech-loading firearms. A tax is levied on all pilgrims passing through to DWĀRKA and Pindtārak, a seaport under Khambhāliya which contains a celebrated shrine. It is said that the remains of several ancient temples, now covered by the sea, are visible at extremely low tides. Khambhāliya is the head-quarters of a *mahāl* or revenue division of the Navānagar State.

Khambhtāv.—Petty State in KĀTHIĀWĀR, Bombay.

Khāmgaon Subdivision.—Subdivision of Buldāna District, Berār, consisting of the *tāluks* of JĀLGAON and KHĀMGAON.

Khāmgaon Tāluk.—*Tāluk* of Buldāna District, Berār, lying between 20° 26′ and 20° 55′ N. and 76° 32′ and 76° 48′ E., with an area of 443 square miles. The population rose from 99,785 in 1891 to 102,948 in 1901, the density in the latter year being 232 persons per square mile. The *tāluk* contains 134 villages and two towns, KHĀM-

GAON (population, 18,341), the head-quarters, and SHEGAON (15,057). The demand for land revenue in 1903–4 was Rs. 3,04,000, and for cesses Rs. 23,000. The Khāmgaon State Railway, connecting Khāmgaon with Jalam on the Great Indian Peninsula Railway, lies within the *tāluk*, which is bounded on the east by the Mūn river and on the north by the Pūrna. The *tāluk* formerly belonged to Akola District, and was transferred to Buldāna in 1905.

Khāmgaon Town.—Head-quarters of the subdivision and *tāluk* of the same name in Buldāna District, Berār, situated in 20° 43′ N. and 76° 38′ E. Population (1901), 18,341. Khāmgaon was the largest cotton market in Berār before Amraotī outstripped it. Its cotton trade dates from about the year 1820, when a few merchants opened shops and began to trade in *ghī*, raw thread, and a little cotton; and it now has several cotton-presses and ginning factories. A state railway, 8 miles in length, connects the town with the Nāgpur branch of the Great Indian Peninsula Railway at Jalam station. The weekly market is held on Thursdays, and during the busy season it is very largely attended. The town has also a special cotton market. The municipality was created in 1867. The receipts and expenditure during the ten years ending 1901 averaged Rs. 35,000 and Rs. 39,000. In 1903–4 the income was Rs. 34,000, derived chiefly from taxes and cesses; and the expenditure was Rs. 25,000, the principal heads being conservancy and education. The town is supplied with water from a tank about 1½ miles distant, and several gardens produce good oranges and vegetables.

Khammamett.—Southern *tāluk* of Warangal District, Hyderābād State, with an area of 990 square miles. The population in 1901, including *jāgīrs*, was 154,540, compared with 154,159 in 1891. The *tāluk* contains 195 villages, of which 13 are *jāgīr*, and Khammamett (population, 3,001) is the head-quarters. The land revenue in 1901 was 4·6 lakhs. Rice is largely grown and irrigated from tanks and wells. The Nizām's Guaranteed State Railway runs through the *tāluk* from north to south.

Khamti Hills.—A hilly country on the frontier of Assam, lying at the eastern end of the Brahmaputra Valley and inhabited by the Khamtis, a tribe of Shan origin, who are said to have migrated northwards to the hills near the upper waters of the Irrawaddy and Mekong when Mogaung was conquered by the Burmese king, Alaungpayā, about the middle of the eighteenth century. A section of the tribe moved on into Assam and settled near Sadiyā, and their leader succeeded in establishing his position as the feudal chief of the surrounding country. He was recognized by the British when they took over the territories of the Ahom prince; but his son declined to abide by the decisions of the local British officer, and was deprived of his office and

dignities. The Khamtis then rose, raided the settlement at Sadiyā, and killed the commanding officer, Colonel White, in 1839. The rising was, however, quickly suppressed, and no trouble has since been given by the tribe.

Bor Khamti, the principal stronghold of this people, consists of the valley of the Namkiu (the western branch of the Irrawaddy) with the surrounding hills. It can be reached via the Pātkai and the Hukawng valley, or by a route running south-east from Sadiyā up the valley of the Diyun, over the Chaukan pass, which is 8,400 feet above the level of the sea. The distance from Sadiyā to Putau, the principal Bor Khamti village, is 197 miles. After Bishi the path is very difficult in places, running through dense forests where there are no villages and no means of obtaining supplies. Oaks, rhododendrons, and beeches grow freely on the hills, and large game, such as elephants and rhinoceros, are common. Putau is situated in a valley, shut in on every side except the south by hills, which in the winter are crowned with snow. The valley is about 25 miles long by 15 broad, and is about 1,500 feet above sea level. The villages are surrounded with a palisade about 12 feet high, made of split trees interlaced with bamboo. The houses are large, commodious structures built on piles, and the audience chamber in the Rājā's house is 50 feet in length by 40 wide Rice is the staple crop grown in the valley, but pulse and poppy are also cultivated, the Khamtis being much addicted to the use of opium. The people are much more civilized than most of the hill tribes on the north-east frontier, and near Putau there is a brick-built temple 95 feet high with a gilded cupola. Some of the images of Buddha in this temple are of considerable artistic merit. The Khamtis seem to stand in some awe of the Singphos, who adjoin them on the west, and also of the Khakus, said to be of the same race as the Singphos, who occupy the hills on the east. Little is known about the geology of the tract, but pyrite, calcho-pyrite, and galena have been found.

[An account of the Khamtis will be found in Colonel Dalton's *Ethnology of Bengal*.]

Khāna.—Village in the head-quarters subdivision of Burdwān District, Bengal, situated in 23° 20′ N. and 87° 46′ E. Population (1901), 1,600. Khāna is an important junction on the East Indian Railway, where the chord-line branches off from the loop-line.

Khānākul.—Village in the Arāmbāgh subdivision of Hooghly District, Bengal, situated in 22° 43′ N. and 87° 52′ E., on the west bank of the Kāna Nadī. Population (1901), 886. There is some trade in brass-ware, and cotton fabrics of a superior quality are manufactured in the neighbourhood. Vegetables are extensively grown for the Calcutta market. A large temple to Siva stands on the river bank.

Khānāpur Tāluka (1).—Southernmost *tāluka* of Belgaum District,

Bombay, lying between 15° 22′ and 15° 47′ N. and 74° 5′ and 74° 44′ E., with an area of 633 square miles. It contains 217 villages, including NANDGAD (population, 6,257). The population in 1901 was 81,902, compared with 85,596 in 1891. The density, 129 persons per square mile, is much below the District average, and it is the most sparsely peopled *tāluka* in the District. The head-quarters are at Khānāpur. The demand for land revenue in 1903–4 was 1·45 lakhs, and for cesses Rs. 11,000. In the south and south-west the country is covered with hills and dense forest; the inhabitants are few and unsettled; and, except in patches, tillage disappears. In the north-west the hills are especially lofty. In the centre, north-east, and east, the country is an open, well-tilled, black-soil plain, with many rich and populous villages. The climate is temperate and healthy during the hot months, but feverish in the cold season and during the south-west rains. The annual rainfall, averaging 71 inches, is heavier than in other *tālukas*.

Khānāpur Tāluka (2).—*Tāluka* of Sātāra District, Bombay, lying between 17° 8′ and 17° 27′ N. and 74° 14′ and 74° 51′ E., with an area of 510 square miles. It contains 91 villages, including KHANĀPUR (population, 5,229) and VITA (5,035), the head-quarters. The population in 1901 was 86,049, compared with 95,931 in 1891. The density, 169 persons per square mile, is much below the District average. The demand for land revenue in 1903–4 was 1·6 lakhs, and for cesses Rs. 13,000. Khānāpur is an upland, rising more than 200 feet above the Karād valley on the west and the great plain of the Mān on the east. It is sparingly wooded, except near the feeders of the Yerla river, which crosses the *tāluka* from north to south on its way to join the Kistna. The climate is fairly temperate, save for occasional hot winds; but the rainfall, which measures only 24 inches annually, is uncertain, and water is often scarce in the hot season. The soil is either black or grey *murram* with its intermediate varieties.

Khānāpur Village.—Village in the *tāluka* of the same name in Sātāra District, Bombay, situated in 17° 15′ N. and 74° 43′ E., about 10 miles east of Vita. Population (1901), 5,229. From its proximity to the fort of Bhopālgarh it was probably in early times the administrative head-quarters of the surrounding country. The town has stone and mud walls, now much decayed, and gates at the north-west and east flanked with bastions. Within the village is an old mosque, containing the tomb of a female saint, supposed to have been the daughter of one of the Bijāpur Sultāns. The mosque contains two inscriptions, in Arabic and Kanarese.

Khandāla.—Sanitarium in the Māval *tāluka* of Poona District, Bombay, situated in 18° 46′ N. and 73° 22′ E., on the Western Ghāts, about 41 miles north-west of Poona city. It is a favourite retreat of

the inhabitants of Bombay during the summer months. Population (1901), 2,322. A much-admired waterfall, distant about half a mile, consists in the rainy season of two cataracts, divided into an upper and a lower fall. The upper cataract has a sheer fall of 300 feet. Khandāla owes its importance entirely to the Great Indian Peninsula Railway, on which it is a station. The climate is temperate in the hot season, owing to the cool sea-breezes. There are a hotel for Europeans, a convalescent home, and a dispensary. Khandāla contains 4 schools with 175 boys and 65 girls, three of which are supported by missions. One is a Roman Catholic Mission school, connected with the St. Mary's College in Bombay, the second is St. Peter's Protestant High School, and the third is maintained by the All Saints' Community of Bombay. Several bungalows have been built by native merchants of Bombay, who resort hither during May and October. In the vicinity are many fine views of the Ghāt range, which runs north and south in lines of great natural beauty. Khandāla is a military sanitarium in the Poona division of the Western Command.

Khandela.—Principal town of an estate of the same name in the Torawati *nizāmat* of the State of Jaipur, Rājputāna, situated in 27° 37′ N. and 75° 30′ E., about 55 miles north-by-north-west of Jaipur city. Population (1901), 9,156. The town has a local reputation for its lacquered articles and toys, and possesses a fort and three indigenous schools attended by 155 pupils. The Khandela estate is held by two Rājās, who pay a tribute of Rs. 72,550 to the Jaipur Darbār.

Khānderi (or Kenery).—Small island in the Alibāg *tāluka* of Kolāba District, Bombay, situated in 18° 42′ N. and 72° 49′ E., near the entrance of Bombay harbour, 11 miles south of Bombay and 6 north-west of Alībāg. It lies 2½ miles from the Kolāba mainland and 1¼ miles from its sister island of UNDERI. Population (1901), 130. The island is a mile and a half long by half a mile broad. A lighthouse, which was built in 1867, stands on the highest part. It is an octagonal masonry tower 78 feet high on the centre of a flat-roofed house, the centre of the lantern being 1,581 feet above the level of high-water. The light is a catadioptric of order 1, and is a single light with groups of flashes showing white with red sector. The period of revolution is ten seconds, and it is visible for 18 miles. A flagstaff 200 feet high stands north-east-by-north from the light tower.

In 1679 Sivajī, whom no advantage escaped, sent 300 soldiers and as many labourers, with arms and materials, to Khānderi, and began to raise breast-works at the landing-places. The island had never before been inhabited, and its only produce was fuel, which had formerly been sent to Bombay. When they heard of Sivajī's works on Khānderi, the English claimed it as part of Bombay, the Portuguese as an old settlement. Two attempts to turn out the Marāthās failed; and even after

a naval battle in which the British fleet of eight ships put to flight 50 sail, the English were not able to prevent the Marāthās strengthening their forces on Khānderi. The Sīdī, as Mughal admiral, joined the English with a strong fleet; but the English commander found that the Sīdī did not mean to give up the island if he took it, and held aloof. The Sīdī continued to batter Khānderi and then suddenly fortified Underi. Daulat Khān, Sivajī's admiral, tried to stop this, bringing guns on the mainland opposite. But he was defeated and severely wounded, his small open boats not being able to stand against the Sīdī's stronger and larger vessels. For several years after this there were constant struggles between the Sīdī and the Marāthās for the possession of these islands. In 1693 Khāfi Khān mentions 'Kalaba and Gandiri' as the strongest of Sivajī's newly built forts on the sea-shore. In 1695 Gemelli Careri calls them Underin and Canderin, two forts on the island and continent, a rock with some dwellings of Sivajī, who was at war with the Great Mughal and consequently in action against the Sīdī. About 1706 Mr. Strutt, Deputy-Governor of Bombay, described Khānderi as strongly fortified by Angriā and covered with houses. Khānderi was one of the ten forts and sixteen fortified places of less strength which, in 1713, Kānhoji Angriā obtained on siding with Rājā Sāhu. In October, 1718, the English tried to take Khānderi and failed. This failure is said to have been due to the treachery of one Rāma Kāmāti who held a confidential post under Governor Boone, while a year later a Portuguese captain, who lay on one quarter of it with some war-vessels to hinder relief coming to it, betrayed his trust, and let some boats pass in the night with provisions and ammunition which the island greatly needed. About 1740 it was settled between the English and the Sīdī that, if Khānderi was taken, it should be delivered with all its guns and stores to the English. The cession of Khānderi to the English was again proposed in 1755. It was not actually ceded until 1775 under the terms of the Treaty of Surat, and shortly after was taken back under the Treaty of Purandhar. Khānderi was then held by the Marāthās till it passed to the British in 1818 as part of the Peshwā's dominions.

Khāndesh District[1].—District in the Central Division of the Bombay Presidency, lying between 20° 16′ and 22° 2′ N and 73° 35′ and 76° 24′ E., with an area of 10,041 square miles. It is bounded on the north by the Sātpura Hills and the Narbadā river; on the east by Berār and the Nimār District of the Central Provinces: on the south by the Sātmāla, Chāndor, or Ajanta hills; on the south-west by the

[1] In 1906 the District was divided into two new Districts called West and East Khāndesh, with head-quarters at Dhulia and Jalgaon. The former contains 7 *tālukas* and one *petha*, with an area of 5,497 square miles, a population of 469,654, and a land revenue of 15·7 lakhs. The latter contains 10 *tālukas* and 3 *pethas*, with an area of 4,544 square miles, a population of 957,728, and a land revenue of 27·4 lakhs.

District of Nāsik; and on the west by Baroda territory and the petty State of Sāgbāra in the Rewā Kāntha Agency.

Physical aspects.

Khāndesh forms the most northerly section of the Deccan table-land. The chief natural feature is the river Tāpti, which, entering at the north-east corner of the District, flows in a westerly direction, dividing it into two unequal parts. Of these, the larger lies towards the south, and is drained by the rivers Girnā, Bori, and Pānjhra. Here is the long central plain of Khāndesh—an unbroken stretch of 150 miles, from the border of Nimār to Nandurbār, comprising an extensive area of rich alluvial soil. In this tract large and prosperous towns and villages, surrounded by mango groves and gardens, are numerous. Except when blasted by the hot winds of the dry season, the fields are clothed with a harvest of various crops. Northwards beyond the alluvial plain the land rises towards the Sātpurā Hills. In the centre and east, save for some low ranges of barren hills, the country is level, and has in general an arid, infertile appearance. Towards the north and west, the plain rises into a difficult and rugged country, thickly wooded, and inhabited by tribes of Bhīls, who chiefly live on the wild fruits of the forest and are supported by the profits of wood cutting. The drainage of the District centres in the TĀPTI, which receives thirteen principal tributaries in its winding course of 180 miles through Khāndesh. None of the rivers is navigable, and the Tāpti flows in too deep a bed to be made use of for irrigation. Its banks rise high and bare at a distance of from 240 to 400 yards across. Except for two waterfalls, one above and the other below the Bhusāwal railway bridge, the river rolls over long sandy stretches for forty miles till it meets the waters of the Vāghar. During the rainy season the Tāpti is not fordable; the only bridge across it is the railway bridge at Bhusāwal. The NARBADĀ skirts the north-west corner of the District for 45 miles. It occasionally serves to carry timber to the coast. Khāndesh District on the whole may be said to be fairly well supplied with surface water, for, besides the rivers that flow during the whole year, the channels of many of the smaller streams are seldom entirely without water. The four principal mountain ranges are: in the north, the SĀTPURA HILLS, dividing the valleys of the Tāpti and the Narbadā, including the peak of Panchu-Pāndu (3,000 feet) and plateau of TURANMĀL (3,300 feet), the starting-point of Khāndesh history; in the south-east, the Hatti; in the south, the SĀTMĀLA, Chāndor, or Ajanta range, separating Khāndesh from the Deccan table-land, and, speaking roughly, from the Nizām's Dominions; on the west, between Khāndesh and Gujarāt, is the northern extremity of the WESTERN GHĀTS. The Arva and Gālna hills divide Khāndesh from Nāsik.

The geology of Khāndesh has been examined only as far south

as the Tāpti. The strip of varying breadth between the Tāpti and Sātpurā Hills is chiefly covered with alluvium. Basalt of the Deccan trap group is the only other formation, composing the hills and showing here and there in the deeper ravines. Basalt probably occurs in the bed of the Tāpti, as, in many places to the south, it rises at no great distance from the stream; and though alluvium stretches north for 15 miles, rock appears near Bhusāwal at the point where the railway bridge crosses the Tāpti. About 5 miles from Burhānpur, and about a mile north-east of Chulkhan village, there is a singular patch of limestone, about 50 feet long. It shows no sign of crystallization and appears to contain no fossils. At one end there is white sandy rock, like decomposed gneiss, standing upright as if part of a vertical bed. The presence of rounded grains points to its being sandstone; and the whole rock is evidently part of an infra-trappean formation, either Lameta or Bāgh, brought up by a dike or included in a lava-flow. The Deccan trap in the north of Khāndesh shows signs of disturbance subsequent to its original formation. The beds are in some places horizontal, as in the Aner valley and near Daulei, north of Chopda, and also westward as far as the Bombay-Agra road, where, on the top of the ascent to Sindwa, the beds stretch in horizontal terraces. The traps of Turanmāl are nearly horizontal, but in the low rises from Burhānpur to the neighbourhood of Raver the beds appear to dip northwards. North-west of Turanmāl is a low east-north-east dip which continues as far as the Udai river. The trap along the north boundary of Khāndesh has a low irregular northerly dip. There are four hot springs, three in Chopda and one in Shirpur[1].

Khāndesh is usually considered a separate botanical province of the Presidency, including the valley of the Tāpti and the western half of the Sātpurā Hills. The former is generally well wooded, and the latter is clothed with dense forests. In the east of the Khāndesh Sātpurās *anjan* and *salai* (*Boswellia serrata*) predominate. In Chopda and Shirpur teak is found in all the valleys. The Shāhāda forests are chiefly *khair*, and in Akhrāni *anjan* reappears on the banks of the Narbadā. On the west the spurs of the Ghāts are remarkable for the growth of *anjan*, and about Sāvda on the east the country has quite a park-like appearance. In the south-east the forest area is small, yielding only a small quantity of *anjan*. The chief trees are the banyan, mango (*Mangifera indica*), *mahuā* (*Bassia latifolia*), *pīpal* (*Ficus religiosa*), *palas* (*Butea frondosa*), *umbar* (*Ficus glomerata*), and *temburni* (*Diospyros melanoxylon*). The chief flowering plants are the *Hibiscus*, *Sida*, *Indigofera*, *Crotalaria*, *Butea*, *Cassia*, *Echinops*, *Trichodesma*, *Commelina*, *Ipomoea*, and *Celosia*.

[1] W. T. Blanford, 'Geology of the Tāpti and Lower Narbadā Valleys, &c.,' *Memoirs, Geological Survey of India*, vol. vi, pp. 286-90 and 344-51.

Wild beasts are numerous, comprising the tiger, leopard, hunting cheetah, bear, lynx, wolf, bison, *sāmbar* deer, spotted deer, *nīlgai*, antelope, 'ravine deer' (gazelle), and the four-horned deer. Up to the seventeenth century the hilly tracts to the north of the District were a breeding-ground for wild elephants. At the time of the introduction of British rule, and for many years after, tigers and leopards were found in every part of the District. As late as 1858, tigers were numerous; but since then they have been very closely hunted, and are now rare.

Owing to differences of elevation, the climate varies greatly in different parts of the District. In the western hills and forests and in the Sātpurās the rainfall is heavy; but over much of the centre and south it is scanty. Nevertheless the District has till quite recently been considered safe from famine. The town of Dhūlia, which may be taken to illustrate the average, has an annual rainfall of 22 inches. In the District it varies from 20 to 45. In the cold season (October to January), except on cloudy days, the climate is pleasant and bracing. During the hot months the air is extremely dry. At Dhūlia the temperature falls as low as 52° in January, rising to 110° in May, when the heat is excessive. The general health of the people is best in the hot and worst in the cold season. Malaria is rife at the beginning of the latter, when the ground commences to dry after the rains. In the east and centre, the climate is trying to Europeans, but healthy to the natives. In the west, all periods except the hot season are injurious to native and European alike.

History.

The early history of Khāndesh extends from 150 B.C., the date of the oldest rock inscription yet discovered and deciphered, to the year A.D. 1295, when the Musalmān emperor Alā-ud-dīn suddenly appeared from Delhi. The mythical annals of the Hindu period may be said to commence with the mention in the Mahābhārata of the hill forts of Turanmāl and Asīrgarh: the ruler of Turanmāl is recorded as having fought against the Pāndavas; the fort of Asīrgarh is named as a place of worship to Ashvatthāma. Local tradition asserts that, from a time long previous to Christianity, the dynasty in power was that of a Rājput chief whose ancestors had come from Oudh. The first line of which distinct record remains is, however, that of the Andhras. The Andhras were temporarily displaced by the Western Satraps; in the fifth century A.D. the Chālukya dynasties rose to power; local chiefs followed; and Khāndesh was under the Chauhān ruler of Asīrgarh when Alā-ud-dīn appeared.

Muhammadan rule lasted until the Marāthās captured the stronghold of Asīrgarh in 1760. In the interval, until the Fārūkis, Khāndesh was subject to successive governors from Delhi, sent by the different dynasties that rose in that city. Under Muhammad bin Tughlak, from 1325 to 1346, Khāndesh was administered from Ellichpur in Berār.

From 1370 to 1600 the Arab dynasty of the Fārūkis administered the District, and, though nominally subject to the Sultāns of Gujarāt, were practically independent. The last year of the sixteenth century (1599) saw the coming of the Mughals. In that year Akbar in person overran Khāndesh at the head of an army, captured Asīrgarh, and sent the reigning prince, Bahādur Khān, to Gwālior for safe keeping. Khāndesh then became incorporated into the Delhi empire. Its name was changed for a time to Dāndesh in honour of its new governor, prince Dāniyāl. In the middle of the seventeenth century it was highly prosperous. From 1670 Marāthā raids commenced, and it was for more than a century given up to every species of calamity, internal and external. In that year Sivajī, after his second sack of Surat, sent an officer to demand *chauth* in Khāndesh. The Marāthās captured and held Sālher fort, and afterwards Khande Rao Dābhāde established himself in the western hills. Thenceforward the District was the scene of numerous plundering raids. Sivajī, Sambhājī, and the emperor Aurangzeb ravaged it in turn. In 1720 Nizām-ul-mulk annexed Khāndesh and held it throughout his life. His son was ousted by the Marāthās in 1760. The Peshwā, on recovering the District, granted portions of it to Holkar and Sindia.

In 1802 the country was ravaged by Holkar's army. For two seasons the land remained uncared for, the destruction and ruin bringing on a severe famine. In the years that followed, Khāndesh was further impoverished by the greed and misrule of the Peshwā. The people, leaving their peaceful callings, joined together in bands, wandering over the country, robbing and laying waste. It was in this state that, in 1818, the District passed into British hands. For many years after annexation the Bhīl tribes gave trouble by outbreaks of lawlessness, and were only brought into submission under the kindlier measures adopted in the time of Elphinstone (1825), who entrusted the work of pacification to the skilful hands of Outram, the founder of the Bhil Corps. A serious riot occurred in 1852, and in 1857 the Bhīls broke out under the leadership of Bhāgoji and Kajarsing Naik; but these disorders were easily suppressed.

Generally distributed over Khāndesh, as well as in Ahmadnagar and the Central Deccan, are the stone-built temples, reservoirs, and wells locally known as Hemādpanti, or in Khāndesh as Gauli Rāj. The term 'Hemādpanti' is derived from Hemādpant or Hemādri, the minister (*mantri*) of Rāmchandra (1271) the Yadava ruler of Deogiri, but is now applied to any old stone building. The local Khāndesh term 'Gauli Rāj' probably also refers to the Yādava kings. In Khāndesh thirty-nine Hemādpanti buildings are found, thirty-one of them being temples, six step-wells and two stone-lined reservoirs. Some may be of greater age, but most of them were probably built in either the

twelfth or the thirteenth century. These Hemādpanti buildings are all of blocks of cut stone carefully joined and put together without mortar. In some the stones are so large as to have given rise to the saying that they are the work of giants.

Besides the Hemādpanti remains, the District possesses some Musalmān buildings, the most important of which is the mosque at ERANDOL. Pitalkhora glen in the Chālisgaon *tāluka* contains a ruined *chaitya* and *vihāra*, very early Buddhist works, probably dating from two centuries before Christ. In the valley beneath is the deserted city of Pātna, where there are old carved temples and inscriptions, while on the hill opposite are other and later caves. The temple of Krishna in Vāghali, built 200 years before Hemādpant lived, contains three fine inscribed slabs in the inner wall of the hall.

Population.

There are 31 towns and 2,614 villages in the District. The Census of 1901 disclosed a total population of 1,427,382, or an increase of 40 per cent. in the last thirty years. In previous years the numbers were: (1872) 1,030,106, (1881) 1,237,308, and (1891) 1,434,802. The increase of 20 per cent. in 1881 was due to immigration, attracted by the large area of unoccupied fertile land available for cultivation. The population decreased by 0·5 per cent. in 1901 owing to a succession of bad harvests (1896–1901). The distribution by *tālukas* is as follows:—

Tālukas.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Taloda	1,177	1	193	33,881	29	− 40	1,080
Shāhāda	479	2	155	59,758	25	− 8	3,162
Nandurbār	992	1	203	67,369	88	− 1	2,818
,, Navāpur *petha*		...	81	20,068		− 34	271
Sindkheda	505	2	141	76,811	152	+ 5	2,963
Shirpur	651	1	99	50,177	77	− 10	2,045
Chopda	368	2	91	75,550	205	+ 4	2,763
Yāval	250	2	75	82,299	329	+ 3	4,614
Rāver	481	2	106	80,368	67	+ 5	4,667
Pimpalner	933	...	151	56,038	61	− 5	2,000
Dhūlia	760	2	154	104,952	138	+ 7	6,435
Amalner	528	1	164	73,083	211	+ 4	2,458
,, Pārola *petha*		1	64	38,210		− 4	1,893
Erandol	458	3	195	105,840	231	...	6,435
Jalgaon	319	2	80	85,151	269	+ 1	5,516
Bhusāwal	570	3	105	76,943	192	− 2	5,387
,, Edalābād *petha*		...	75	32,372		− 9	1,163
Jāmner	527	2	155	91,739	174	+ 5	3,343
Pāchora	542	2	121	80,724	231	+ 1	3,934
,, Bhadgaon *petha*		1	65	44,612		+ 7	2,244
Chālisgaon	501	1	132	90,837	181	+ 21	3,582
District total	10,041	31	2,614	1,427,382	142	−0·5	68,773

The chief towns are: DHŪLIA (the head-quarters of the new District of West Khāndesh), BHUSĀWAL, DHARANGAON, NASĪRĀBĀD, NANDURBĀR, CHĀLISGAON, BHADGAON, JĀMNER, ADĀVAD, CHOPDA, JALGAON (the head-quarters of the new District of East Khāndesh), PĀROLA, ERANDOL, AMALNER, FAIZAPUR, PĀCHORA, NAGARDEVLA, and BODVAD. The average density is 142 persons per square mile, but the western portion of the District is on the whole more thinly populated than the east. Shāhāda and Taloda are the *tālukas* of smallest density, and Yāval and Jalgaon are the most densely populated. Of the total population, 90 per cent. are Hindus, 8 per cent. Musalmāns, 12,298 or 0·9 per cent. Jains, and 11,600 or 0·8 per cent. Animists; Christians number 1,398. Gujarātī is in use among the higher classes of husbandmen to the north of the Tāpti, and it is the language of trade throughout the District; but Marāthī, the speech of the people in the south and west, is the language of Government offices and schools, and is gradually gaining ground. In their homes the majority of the people speak a dialect known as Khāndeshī or Ahirānī, a mixture of Gujarātī, Marāthī, Nemādī, and Hindustāni, in which Gujarātī predominates.

The important castes are: Kunbī, 330,000; Bhīl, 167,000 (of whom 10,000 are Musalmāns); Mahār, 107,000; Marāthā, 94,000; Mālī (gardener), 60,000; Kolī, 57,000; Brāhman, 50,000; Vānī, 47,000 (chiefly Gūjars); Rājput, 40,000; Dhangar, 39,000; Vanjārī, 32,000; Teli (oil-men), 27,000; Sonār (goldsmith), 24,000; Nhāvi (barber), 21,000; Chamār (leather-worker), 20,000; Sutār (carpenter), 16,000; Shimpi (tailor), 16,000; and Māng, 13,000. Of the thirteen divisions of Brāhmans in the District, three understand but do not speak Marāthī; the remaining ten use that language. As a rule, the main divisions eat together but do not intermarry; the subdivisions as a rule do both. Deshasths (32,546) are most numerous. The others are the descendants of Brāhmans from every part of India who found their way to Khāndesh. The Prabhus, a section of the 'writer' class, are scattered over the District, most of them in the service of Government.

Besides the general body of cultivators, who are Kunbīs by caste, large numbers of Pārdhīs (5,150), a low caste of wandering hunters and snarers, and Rājputs have long been settled in the District. Another class of cultivators worthy of notice are the Gūjar Vānīs, the most industrious and well-to-do of the agricultural population. Their name, and their habit of speaking Gujarāti among themselves, show that they are immigrants from Gujarāt. Most of the traders are foreigners: Baniās from Mārwār and Gujarāt, and Bhātias, recent comers from Bombay. Wandering and aboriginal tribes form a large section of the population. Many of the Bhīls are employed on police duties and as village watchmen. But though most have settled down to peaceable

ways, they show little skill in farming. Since the introduction of British rule into Khāndesh, the efforts made, by kindly treatment and the offer of suitable employment, to win the Bhīls from a disorderly life have been most successful. With the Mahārs they form the labouring class in nearly all the villages of Khāndesh. The Nirdhīs dwell along the foot of the Sātmālas. In former times they were much dreaded. During seasons of revolt the most atrocious acts were invariably the work of the Nirdhīs. Vanjāris or Lamānis, the pack-bullock carriers of former and the gipsies of present times, have suffered much from the increased use of carts and the introduction of the railway. A few are well-to-do traders; but most of them live apart from the villages, in bands or *tāndās*, each with its own leader or *naīk*. Forced to give up their old employment, they now live chiefly by grazing, and cutting grass and wood. The majority of the Musalmāns are converts from Hinduism and are styled Shaikhs (55,787). In 1901, 18,504 Pathāns, descendants of the Musalmān invaders, were found in the District. More than 50 per cent. of the population are agriculturists, and various industries support 22 per cent.

Of the 821 native Christians in the District in 1901, 440 were Roman Catholics and 132 Anglicans. There are Roman Catholic chapels at Dhūlia, Bhusāwal, and Dharangaon. For missionary purposes the District is divided into three parts, the western portion being occupied by the Scandinavian-American Mission, the centre by the Church Missionary Society, and the east by the American Alliance Mission. The head-quarters of the first-named society are at Nandurbār, of the second at Dhūlia, while the Alliance Mission has stations along the Great Indian Peninsula Railway at Bhusāwal, Jalgaon, Pāchora, and Chālisgaon. Besides these, there are two smaller semi-independent missions: the Tāpti Valley Railway Industrial Mission at Navāpur, which works chiefly among the Bhīls, and the Peniel Mission at Dharangaon. The majority of the Christian population reside at Nandurbār, Dhūlia, Bhusāwal, and Dharangaon.

Agriculture.

The soils are composed of all grades, from the deep rich black of the Tāpti valley to the poor stony red and white of the low trap ranges. The local husbandmen divide them into four classes: *kāli* (black), *pāndhari* (white), *khāran* (salt), and *burki* (white and salt).

The District is chiefly *ryotwāri*, only about 2 per cent. of the total area being held on *udhād* tenure and 3 per cent. as *inām* land. The chief statistics of cultivation in 1903–4 are shown in the table on the next page, in square miles.

Jowār and *bājra* are both largely grown in Khāndesh, the areas under these crops being 667 and 929 square miles respectively. *Jowār* is chiefly grown as a *kharīf* crop, in rotation with cotton.

Bājra everywhere holds a far more important place. Wheat, with an area of 182 square miles, is grown throughout the District, though most common along the Tāpti valley and in the west. The chief pulses are *tur*, gram, *udid*, *kulith*, and *mūg*, which together occupied 581 square miles in 1903–4. *Til* and linseed are the principal oilseeds, covering 250 and 63 square miles respectively. The former is considered the more profitable crop. The area under the latter varies considerably according to the nature of the late rains. Cotton, long one of the chief crops, occupied 2,013 square miles. It is seldom grown oftener than once in three years in the same field, and the local variety has been supplemented by Hinganghāt and Dhārwār seed.

Tāluka.	Total area.	Cultivated.	Irrigated.	Cultivable waste.	Forest.
Taloda . .	1,177	100	1	18	15
Shāhāda . .	482	284	1	16	74
Nandurbār . .	992	243	3	69	49
Sindkheda . .	505	377	4	20	34
Shirpur . .	678	201	...	17	27
Chopda . .	368	228	...	16	14
Yāval . .	249	214	5	1	3
Rāver . .	480	205	3	12	12
Pimpalner . .	932	344	9	163	299
Dhulia . .	759	412	7	55	199
Amalner . .	528	409	8	9	33
Erandol . .	458	366	3	8	27
Jalgaon .	319	223	2	5	36
Bhusāwal . .	570	379	3	23	106
Jāmner . .	527	370	1	39	65
Pāchora .	542	388	3	17	44
Chālisgaon .	504	306	3	16	95
Total	10,070*	5,054	56	304	1,132

* For 2,530 square miles of this area statistics are not available. There have been changes since 1900 in the areas of several *tālukas*, owing to the introduction of the revision survey.

Several attempts have been made, dating from 1829, to reclaim the Pāl *tappa*, a waste tract in the neighbourhood of the Sātpurā Hills, which is said to have been formerly well inhabited. At the time of the British occupation in 1818, this was a deserted jungle, excessively unhealthy, and infested with wild beasts. It is said to have been deserted about the middle of the seventeenth century, owing to famine; and the remains of ancient buildings show that the village of Pāl was formerly of considerable importance. Special efforts to improve the staple of the local cotton have been made for many years, but the cultivation of exotic varieties has not spread; it is found that the exotics speedily deteriorate in quality and give an inferior yield to that of the local variety. In 1903–4 a small plot of land was acquired by Government at Dhūlia, and several varieties of cotton and *jowār*,

new to the District, were sown. The experiment is reported to be more promising than previous attempts, but definite results have not been arrived at. Sugar-cane is grown in small areas where irrigation is available. Chillies, fennel, and coriander are the principal condiments and spices. The cultivation of betel-vines is carried on with considerable success in garden lands.

The cultivators of Khāndesh have availed themselves freely of the Land Improvement and Agriculturists' Loans Acts, and nearly 25 lakhs was advanced during the decade ending 1904. Of this sum, nearly 20 lakhs represents advances made during the famine years 1899–1900, 1900–1, and 1901–2.

The District contains many fine cows and bullocks, brought chiefly from Nimār and Berār. The Thilāri herd of cattle of West Khāndesh has a good reputation in the Deccan; but the greater number of the cattle are small and poor, reduced during the hot season to the most wretched condition. The horses also are small and of little value. To improve the breed, the Civil Veterinary department maintains two pony stallions at Dhūlia and Chālisgaon, which are not, however, fully utilized.

Irrigation is practised mainly from dams thrown across the streams, particularly on the Girnā and Pānjhra rivers, and there are lakes and reservoirs which also serve for irrigation. The area under various classes of irrigation is 56½ square miles, or a little more than one per cent. of the total cultivated area of the District. Government canals supply 16 square miles, private canals one, wells 38, and other sources 1½ square miles. The dams must at one time have been very numerous. In the west there is scarcely a stream of any size without traces of them. Of works carried out by the Irrigation department the chief are: lower Pānjhra river works, the Hartāla tank, the Jāmda canals, and the Mhasva lake. The first two are old works improved and extended; the others are new. The lower Pānjhra water-works, which are estimated to command nearly 20 square miles, supply about 4 square miles in Dhūlia and Amalner. The Jāmda canals on the Girnā, one of the earliest Government water-works, which are estimated to command 72 square miles, water about 2 square miles, mostly in Chālisgaon and Pāchora. The Hartāla lake in the Bhusāwal *tāluka* commands an area of 600 acres, but did not supply water in 1903–4. The Mhasva lake in the petty subdivision (*petha*) of Pārola in Amalner irrigated a total area of 181 acres, and is estimated to command 4,600 acres. Over most of the District water is found near the surface. But near the Sātpurās and within 8 or 10 miles of the Tāpti, wells have sometimes to be dug as deep as 100 feet. For drawing water the leathern bag or *mot* is in almost universal use. Each bag waters a quarter of an acre daily. In 1903–4, 83 other

irrigation works (including the Parsul tank, irrigating 668 acres) watered 19,500 acres. Wells numbered 27,031, and minor tanks 12.

Forests.

Khāndesh is the most important forest District of the Bombay Presidency after Kanara. The absence of conservancy rules in the past and the destructive habits of the hill tribes have robbed the jungles of most of their valuable timber. The forest Reserves now cover more than 2,168[1] square miles, and the area of fodder reserves and pasture land under the control of the Revenue department is 284 square miles. They lie chiefly on the hills to the west and south-west, but much of the hilly land unsuited for cultivation may eventually be reserved for forest. In spite of its large area, Khāndesh uses more timber than it grows. The most important minor produce is the *mahuā* flower. Myrabolams and *mahuā* seed are collected in the west. Teak, *babūl*, and black-wood are of common occurrence. The gross forest revenue in 1903-4 amounted to 2·3 lakhs. The District is divided into two forest divisions, which are in charge of divisional Forest officers aided by two subdivisional officers.

Khāndesh has little mineral wealth. Building stone occurs everywhere, the best quarry being in the bed of the Vāghur river near Bhusāwal. *Kankar* or nodular limestone is found in all black soil and yields good lime, while clay suitable for brick-making is obtainable in all parts of the District.

Trade and communications.

The crafts and industries are of some importance. Cotton-pressing and ginning is carried on in 36 presses with 2,228 operatives. The weaving of coarse woollen blankets is common all over the District. There is a cotton-spinning and weaving mill at Jalgaon, started in 1874, under the name of the Khāndesh Spinning and Weaving Company. It has 425 looms and 20,048 spindles, and employs 1,185 hands. The out-turn is over 2 million pounds of yarn and 1½ million pounds of cloth, and the paid-up capital 7½ lakhs. The cloth is sold in Khāndesh, Berār, and the Nizām's Dominions. There are railway workshops at Bhusāwal.

The most important article of export is cotton. The Bombay Bhātias buy it from local dealers and growers, and press it for direct shipment by sea. Of late years many Bombay mercantile houses have established agencies in Khāndesh, and towards the east in the rich Tāpti valley. Jalgaon and Bhusāwal are rising into important centres of trade. The other chief exports are food-grains, oilseeds, butter, indigo, wax, and honey. Of imports the chief articles are salt,

[1] This figure differs from that in the table on p. 233, owing to the omission of forest statistics of certain villages in the Shāhāda *tāluka* and to the non-inclusion in the revenue returns of the forest area of the Mehwās estates.

spices, metals, piece-goods, yarn, and sugar. The internal trade is carried on by means of weekly markets and a succession of fairs and religious feasts.

At the beginning of British rule there were no made roads. The first to be constructed was the Bombay-Agra road, which runs via Mālegaon, Dhūlia, and Shirpur through the District. Since then road-making has made considerable progress, and some of the passes through the hills have been opened to cart traffic. Besides the Bombay-Agra road, the chief roads are those from Dhūlia to Surat and from Dhūlia to Mhasawad. The total length of roads is 955 miles, of which 325 are metalled. Of these, 300 miles of metalled roads and 252 miles of unmetalled roads are maintained by the Public Works department. Avenues of trees are planted on about 950 miles. The Great Indian Peninsula Railway runs for 137 miles through the south of the District from Naydongri to Bhusāwal, where it divides, one branch going to Jubbulpore and the other to Nāgpur. Branches from Jalgaon to Amalner, 35 miles long, and from Chālisgaon to Dhūlia, 35 miles in length, were opened in 1900. The Tāpti Valley Railway from Surat to Amalner, running for 108 miles through the central portion of the District from east to west, was opened in March, 1900, and has ten stations within its limits.

Famine, &c.

The Tāpti and lesser streams are liable to sudden and disastrous rising of their waters. Six great floods caused more or less injury in the District during the nineteenth century. In 1822 sixty-five villages were entirely destroyed by the Tāpti, and fifty were partly washed away, causing a loss in money value of 2½ lakhs. In 1872 the Girnā and Pānjhra rose 45 feet above the level of the river-bed, the latter sweeping away five hundred houses in the town of Dhūlia. A whole village on the opposite side of the river suddenly disappeared. One hundred and fifty-two villages were damaged, and property to the value of 16 lakhs destroyed. Over one thousand persons were on this occasion relieved by public and private charity.

Besides the Durgā-devī famine, which is said to have greatly reduced the population of Khāndesh, the only scarcity mentioned before the beginning of the last century was in 1629. In that year, following the ravages of war, there was a total failure of rain which caused widespread distress. A severe famine was recorded in 1802–4, when the selling price of grain is reported to have risen to one seer per rupee. Great numbers died, and extensive tracts were left deserted and waste. This famine was due, not to any natural causes, but to the ravages of Holkar's army, which during two years (1802–3) spread desolation and famine throughout the District. Scarcities not amounting to famine occurred in 1824, 1833–6, 1845, 1876–7, and 1896–7.

In 1896 the population suffered from a general rise in the prices of food. The early rains, however, were excellent, and the *kharīf* did not fail. The hill tribes therefore suffered little, and West Khāndesh was free from the pinch of the high prices. Relief works were maintained for fourteen months, the workers reaching a maximum of 36,560 in April, 1897. In 1899 the failure of the rains affected all parts of the District, and the distress lasted for fourteen months. The *kharīf* crop was a total failure and the *rabi* area was not sown, except in irrigated lands, there being no late rains. As early as October, 1899, the number on relief works exceeded 33,000. It advanced steadily till in March of 1900 it was 257,000, while the number on gratuitous relief was 13,000. From this it fell to 553 in February, 1901, rising again to 42,000 in July, 1901, and falling to 1,800 in September. It is calculated that 79,000 deaths occurred in excess of the normal during the period, and that 385,000 cattle died. The total cost was about 76 lakhs. Remissions amounted to 17 lakhs, and nearly 20 lakhs was granted in loans to agriculturists.

Locusts have sometimes visited Khandesh, but seldom in sufficient numbers to do much harm. In 1869 a large cloud crossed the District from north to south, and in 1873 and 1878 they did some injury to the late crop. Rats in 1847–8, 1878–9, and in 1901–2 caused much havoc.

Administration.

The District is divided into seventeen *tālukas*, in charge of three covenanted Civilians and two Deputy-Collectors. Of the three covenanted Civilians, one is Personal Assistant to the Collector, who has also an extra Deputy-Collector as *daftardār*. There are four petty subdivisions or *pethas*. Pārola, Bhadgaon, Navāpur, and Edalābād, in the *tālukas* of Amalner, Pāchora, Nandurbār, and Bhusāwal respectively. The formation of two separate Districts is referred to in the note on p. 225. The Mehwās estates are included in the District for administrative purposes.

The District and Sessions Judge at Dhūlia is aided for civil business by ten Subordinate Judges. Criminal justice is administered by 50 Magistrates, including the District Magistrate. The commonest forms of crime are theft, house-breaking, and dacoity.

On occupation by the British, 1,146 Government villages were found entirely deserted, besides 413 which were uninhabited but partly tilled by persons living in the neighbouring villages; only 1,836 villages were inhabited. The establishment of order and the advent of high prices soon caused a rapid increase in tillage and revenue. But a subsequent fall in prices checked improvement, and progress was slow for several years. After 1832 the improvement began to be more marked, and continued steadily up to 1852. One of the first measures of im-

provement was the withdrawal from the hereditary officials of powers the possession of which by them was found to be a source of oppression to the people. The settlement of the revenue was then made direct with the cultivators and not with the headmen of the villages. The revenue was fixed on the average payments of ten previous years. Gradually, inequalities of measurement were reduced to a common standard. About 1830 it was found that the assessments were too high, leaving no margin to the cultivator for improvements. Great reductions were then made in the rates on irrigated lands; the rates on 'dry-crop' lands were also reduced, wherever this was found to be necessary, and liberal remissions were made. Still progress was slow; and no attempt was made until 1852 to introduce a survey, which, it was felt, would be very costly. In that year, as it appeared that the rates in Khāndesh were higher than in other Districts, it was determined to carry out a survey on a plan suited to a country where so much of the land was waste. The objects of it were misunderstood, and troops had to be called out. But, on the leaders being seized, the opposition died away and the work was carried out between the years 1854 and 1870. Since then the District has made a most marked advance. Its population has largely increased and the area under cultivation has nearly trebled. Cultivation has been pushed to the base of the hills; and only in a few parts can good land now be found untilled, while wild beasts have been driven from the plain to the hills and the ravines. This remarkable development is, no doubt, in great measure due to the facilities offered by the railway for the export of produce to better markets, and to the great demand for cotton, which Khāndesh is in a position to satisfy. The revision survey settlement was commenced in 1886 and completed (with the exception of a small area, chiefly in Nandurbār, originally settled in 1901-3) in 1904. The new survey found an increase in the cultivated area of 4 per cent. over the amount shown in the accounts, and the settlement enhanced the total revenue from 31 to 40 lakhs. The average assessment per acre of 'dry' land is Rs. 1-6; of rice land, Rs. 1-10; and garden land, Rs. 2-14.

Collections on account of land revenue and revenue from all sources have been, in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue . .	34,13	39,76	50,32	48,60
Total revenue .	46,27	57,40	64,72	67,59

The District has 21 municipalities: namely, AMALNER, PĀROLA, ERANDOL, DHARANGAON, BHADGAON, CHOPDA, SHIRPUR, SINDKHEDA, BETWAD, SAVADA, YĀVAL, BHUSĀWAL, JĀLGAON, DHŪLIA, SONGĪR,

TALODA, SHĀHĀDA, PRAKĀSHA, NANDURBĀR, FAIZPUR, and RĀVER. The total receipts of these average nearly 3 lakhs. The District board and 17 *tāluka* boards had an income in 1903–4 of 4¼ lakhs. The principal source of income is the land cess. The expenditure amounted to 4¼ lakhs, including nearly 2 lakhs devoted to the maintenance and construction of roads and buildings.

The District Superintendent of police is aided by three Assistant Superintendents, one probationary Assistant Superintendent, and four inspectors. There are altogether 37 police stations. The force in 1904 numbered 1,636: namely, 23 chief constables, 335 head constables, and 1,278 constables. The mounted police number 62 under 8 *daffadars*. In addition to the District jail at Dhūlia, with accommodation for 450 prisoners, there are 23 subsidiary jails and 21 lock-ups which can accommodate 408 and 202 prisoners respectively. The daily average number of prisoners in 1904 was 493, of whom 16 were females.

Khāndesh stands twelfth as regards literacy among the twenty-four Districts of the Presidency. The Census of 1901 returned 4·8 per cent. of the population (9·3 males and 0·2 females) as able to read and write. Education has made great progress of late years. In 1881 there were only 317 schools, attended by 18,656 pupils. The number of pupils rose to 29,346 in 1891 and to 30,293 in 1901. In 1903–4 the schools numbered 538 (including 122 private schools with 1,713 pupils), attended by 22,181 pupils, of whom 845 were girls. One is a high school, 12 are middle schools, 401 primary, one is a training school, and one an industrial school. Three are maintained by Government, 332 by local boards, 70 by municipalities, and 11 are aided. The training school and the industrial school are at Dhūlia. The expenditure on education in 1903–4 was 2¼ lakhs, of which Local funds contributed Rs. 73,000 and Rs. 24,000 was recovered as fees. Of the total, nearly 80 per cent. was devoted to primary schools.

The District contains twenty dispensaries, one hospital, and two other medical institutions, accommodating 167 in-patients. In these institutions 114,213 persons, including 1,220 in-patients, were treated in 1904, and 3,797 operations performed. The total expenditure was over Rs. 39,000, of which Rs. 16,940 was contributed by Local and municipal funds.

The number of persons successfully vaccinated in 1903–4 was 39,000, representing a proportion of 27 per 1,000 of population, which exceeds the average for the Presidency.

[Sir J. M. Campbell, *Bombay Gazetteer*, vol. xii (1880); A. F. Davidson, *Settlement Report* (1854).]

Khandgiri.—Hill in the Khurdā subdivision of Purī District, Bengal, situated in 20° 16′ N. and 85° 47′ E., about 4 miles west of Bhubaneswar. It consists of two separate peaks, the northern one of

which is called Udayagiri and the southern Khandgiri, the last name being also applied to the entire group. The caves on this hill were occupied by monks of the Jain sect, and not, as is usually stated, by Buddhists. The earliest of them go back to the time of king Khāravela, whose large but mutilated inscription over the Hāthi Gumpha cave is dated in the year 165 of the Maurya era, or 155 B.C.; and there are also short inscriptions of his queen and immediate successors. Various mediaeval Jain carvings and inscriptions show that the Jains continued to occupy the caves till about the twelfth or thirteenth century; and there still exist later Jain temples, one of which, on the top of the Khandgiri peak, is annually visited by Jain merchants from Cuttack. Of the oldest caves the most interesting are the following: On the Udayagiri peak, (1) the Rānī Gumpha, comprising two storeys with open verandas. The frieze of the upper veranda contains a series of relief carvings, evidently representing one connected story, in which occurred a fight with wild elephants, the rape of a female, and a hunt after a winged antelope; the legend to which it refers has not, however, been traced. (2) The Ganesh Gumpha, with a carved frieze representing the same story as in the Rānī Gumpha; the steps of the cave are flanked by the figures of two elephants. (3) The Hāthi Gumpha, with the famous inscription of king Khāravela, a purely historical record of the principal events of his life. Unfortunately it has been badly mutilated, but it has recently been protected by a shade to preserve it from further destruction. (4) The Bāgh Gumpha, shaped like the head of a tiger; and (5) the Svarga Gumpha, (6) the Maujapuri, and (7) the Pātāl Gumpha, three caves raised one above the other and consequently now explained as a representation of heaven, earth, and hell. On the Khandgiri peak, the most notable of the old caves are the Ananta Gumpha, with carved panels over its gates, representing Lakshmī, the sun-god, an elephant, and the worship of a sacred tree; the Tentuli Gumpha, so called from a tamarind-tree close to it; and the Tantuā Gumpha I and Tantuā Gumpha II, one above the other. The name *tantuā* means a diving-bird and has been given to these caves on account of the figures of birds, with their heads bent down as if in the act of diving, which have been carved over the arches of the doors. The best specimens of mediaeval caves are: the Navamuni cave, with an inscription dated in the eighteenth year of king Uddyota Kesari, who preceded the Ganga kings and belonged to the family of the so-called Somavansi, or kings of the lunar race, who ruled over Orissa in the tenth and eleventh centuries; and the Sātghara cave, which has numerous mediaeval Jain figures carved over its walls.

[*Report of the Archaeological Survey of India for* 1902–3 (Calcutta, 1904).]

Khāndla.—*Petty State in* KĀTHIĀWĀR, *Bombay.*

Khandparā.—One of the Tributary States of Orissa, Bengal, lying between 20° 11′ and 20° 25′ N. and 85° 0′ and 85° 22′ E., with an area of 244 square miles. It is bounded on the north by the Mahānadī river, which separates it from the States of Narsinghpur and Barāmbā; on the east by Cuttack and Purī Districts; on the south by Purī and the State of Nayāgarh; and on the west by Daspallā State. The State originally formed part of Nayāgarh, and was separated from it about 200 years ago by a brother of the Nayāgarh Rājā, who established his independence. The State has an estimated revenue of Rs. 30,000, and pays a tribute of Rs. 4,212 to the British Government. The land is very fertile, and the State is one of the best cultivated in Orissa. Fine *sāl* timber (*Shorea robusta*) abounds in the hilly tracts, and magnificent banyan and mango trees stud the plain. It is intersected by the Kuariā and Dauka rivers, small tributaries of the Mahānadī. The population increased from 63,287 in 1891 to 69,450 in 1901. The number of villages is 325, of which the most important is KANTILO, a large mart on the Mahānadī. The density is 284 persons per square mile. The State maintains a charitable dispensary, a middle vernacular and 30 lower primary schools.

Khandwā Tahsīl.—North-western *tahsīl* of Nimār District, Central Provinces, lying between 21° 31′ and 22° 20′ N. and 76° 4′ and 76° 59′ E., with an area of 2,046 square miles. The population in 1901 was 181,684 compared with 163,003 in 1891. The density is 89 persons per square mile. The *tahsīl* contains one town, KHANDWĀ (population, 19,401), the head-quarters of the District and *tahsīl*; and 437 inhabited villages. Excluding 671 square miles of Government forest, 58 per cent. of the available area is occupied for cultivation. The cultivated area in 1903–4 was 713 square miles. The demand for land revenue in the same year was Rs. 1,67,000, and for cesses Rs. 18,000 The *tahsīl* consists of an undulating plain, forming the valleys of the Abnā and Suktā rivers, and fringed by low hills towards the north and west.

Khandwā Town.—Head-quarters of Nimār District, Central Provinces, situated in 21° 50′ N. and 76° 22′ E., on the Great Indian Peninsula Railway, 353 miles from Bombay, and forming the junction for the metre-gauge Rājputana-Mālwā branch line to Mhow. The town stands at an elevation of 1,007 feet, on a sheet of basalt rock covered with shallow surface soil; and, because of the proximity of the rock to the surface, there is a noticeable absence of trees. The population at the last four enumerations was: (1872) 14,119, (1881) 15,142, (1891) 15,589, and (1901) 19,401

Khandwā is a place of considerable antiquity. Owing to its situation at the junction of the two great roads leading from Northern and Western India to the Deccan, it must have been occupied at an early

period, and Cunningham identifies it with the Kognabanda of Ptolemy. It is mentioned by the geographer Albirūnī, who wrote early in the eleventh century. In the twelfth century it was a great seat of Jain worship; and many finely carved pillars, cornices, and other stonework belonging to old Jain temples may be seen in the more modern buildings. The town has four old tanks with stone embankments. A new Jain temple, constructed at a cost of Rs. 75,000, is now approaching completion. Khandwā is mentioned by the historian Firishta as the seat of a local governor of the kingdom of Mālwā in 1516. It was burnt by Jaswant Rao Holkar in 1802, and again partially by Tāntiā Topī in 1858.

Khandwā was created a municipality in 1867. The municipal receipts and expenditure during the decade ending 1901 averaged one lakh. In 1903–4 the income was Rs. 1,07,000, the main heads of receipt being octroi (Rs. 65,000), markets and slaughter-houses (Rs. 5,000), and conservancy (Rs. 3,000); while the expenditure, which amounted to Rs. 1,04,000, included refunds of duty on goods in transit (Rs. 34,000), conservancy (Rs. 8,000), education (Rs. 10,000), and general administration and collection of taxes (Rs. 8,000). The town is supplied with water from the adjoining Mohghāt reservoir. The catchment area of the tank has been increased by the construction of a canal 3¾ miles in length to Ajanti, and is now about 9 square miles, the daily supply being calculated at 450,000 gallons. The works were opened in 1897 at a cost of 4 lakhs. The maintenance charges amount to about Rs. 5,000, to meet which a water rate has recently been imposed. Cotton is an important crop in Nimār District, and Khandwā is a centre for the export of the raw product. It now contains 9 ginning and 5 pressing factories, which have a total capital of about 6½ lakhs and employ 1,000 operatives. Seven out of the fourteen factories have been opened within the last eight years. An oil-pressing and timber-sawing factory has also been erected. The dépôt for the supply of *gānja* (*Cannabis sativa*) to the Central Provinces is situated at Khandwā, the crop being grown under licence in Nimār District. A rest camp for troops is maintained during the trooping season. There is a printing press, which issues a weekly paper in Marāthī. The educational institutions comprise a high school, with 46 pupils, two English middle schools, and four branch schools. The Roman Catholic and Methodist Episcopal Churches carry on mission and educational work in Khandwā, and maintain schools and an orphanage. The town has three dispensaries, one of which is a police hospital and another is maintained by the railway. A veterinary dispensary has recently been opened.

Khāngāh Dogrān Tahsīl.—*Tahsīl* of Gujrānwāla District, Punjab, lying between 31° 31′ and 31° 59′ N. and 73° 14′ and 74° 5′ E., with

an area of 873 square miles. This *tahsīl* was formed, mainly out of the unwieldy *tahsīl* of Hāfizābād, in 1893. The population in 1901 was 237,843. It contains 239 villages, including KHĀNGĀH DOGRĀN (population, 5,349), the head-quarters. The land revenue and cesses in 1903–4 amounted to Rs. 3,41,000. The *tahsīl* consists of a uniform Bār tract with a soil of good loam. Three-fourths of it are now irrigated by the Chenāb Canal.

Khāngāh Dogrān Village.—Head-quarters of the *tahsīl* of the same name in Gujrānwāla District, Punjab, situated in 31° 49′ N. and 73° 41′ E. Lying in the heart of the Bār, it was until recently famous only for a number of Muhammadan shrines at which a fair is held in June. In 1893 it was made the head-quarters of the newly constituted *tahsīl* named after it; and as it lies in the centre of the tract brought under irrigation by the Chenāb Canal, it is rapidly growing in importance, as is testified by the increase of its population from 877 in 1881 and 1,646 in 1891 to 5,349 in 1901. The village is administered as a 'notified area.' It contains a cotton-ginning factory, which in 1904 employed 34 hands.

Khāngarh.—Town in the District and *tahsīl* of Muzaffargarh, Punjab, situated in 29° 55′ N. and 71° 10′ E., 11 miles south of Muzaffargarh town and 4 miles west of the Chenāb, on the road leading to Sind. Population (1901), 3,621. It was built by Khān Bībi, sister of Muzaffar Khān, and at the beginning of the last century was an Afghān post; but the town has now outgrown the dimensions of the circular fortification which originally enclosed it. At annexation in 1849 it became the head-quarters of the District, but was abandoned in 1859 on account of floods from the Chenāb. The municipality was created in 1873. The income during the ten years ending 1902–3 averaged Rs. 6,200, and the expenditure Rs. 6,400. In 1903–4 the income was Rs. 6,400, chiefly from octroi; and the expenditure was Rs. 5,600. The town contains a small cotton-ginning and rice-husking factory, which gave employment in 1904 to 25 persons; but it owes such importance as it possesses to its being the agricultural centre for a fertile tract.

Khaniādhāna.—Small *sanad* State in the Central India Agency, under the Resident at Gwalior. It has an area of about 68 square miles, lying round the town of the same name. It is bounded on the east by Jhānsi District of the United Provinces, and on all other sides by Gwalior State. Although the State is situated politically in the Gwalior Residency, it lies geographically in Bundelkhand, and until 1888 was included in the Political Charge of that name.

Khaniādhāna was originally a part of Orchhā; but in 1724 it was granted by Mahārājā Udot Singh of Orchhā to his son Amar Singh, together with the villages of Mohangarh and Ahar. On the dis-

memberment of the Orchhā State by the Marāthās a *sanad* was granted to Amar Singh by the Peshwā in 1751, confirming him in his grant. The question of suzerainty was, from this time onward, always a subject of contention between the chiefs of Orchhā and of the Marāthā State of Jhānsi. On the lapse of the latter State in 1854, the Khaniādhāna chief, Pirthīpāl Bahādur Jū Deo, claimed absolute independence. It was, however, ruled that he was dependent on the British Government as successor to all the rights previously exercised by the Peshwā; and a *sanad* was accordingly granted in 1862 confirming him in his possession, a *sanad* of adoption being granted at the same time. The chiefs of Khaniādhāna are Bundelā Rājputs of the Orchhā house, and bear the title of Jāgīrdār. The present chief, Chitra Singh, who succeeded in 1869, obtained the title of Rājā as a personal distinction in 1877.

The population has been: (1881) 13,494, (1891) 14,871, and (1901) 15,528. Hindus number 13,548, or 87 per cent.; and Animists, 1,208, or 8 per cent, chiefly Sahariās. The population has increased by 4 per cent. since 1891, and its density is 243 persons per square mile. The chief dialect is Bundelkhandī. Only one per cent. of the inhabitants are literate. The principal castes are Thākurs (Bundelā) and other Rājputs, and the population is almost entirely supported by agriculture. The State contains 49 villages.

The country is rocky, belonging to the Bundelkhand gneiss area. In the valleys, where intrusive dikes of trap are met with, good soil is produced by its disintegration, bearing fair crops of all the ordinary grains. Of the total area, 21 square miles, or 32 per cent., are under cultivation, of which 13 are irrigated. About 27 square miles are capable of cultivation, the rest being rocky and irreclaimable. The chief exercises full powers in all general administrative matters. In criminal cases he is required to report all heinous crimes to the Resident at Gwalior. The total revenue is Rs. 22,000, of which Rs. 18,000 is derived from the land. The British rupee was made legal tender in 1886. There are two schools in the State and one dispensary.

The chief place is Khaniādhāna, situated in 25° 2′ N. and 78° 8′ E. Population (1901), 2,192. It contains a small fort in which the chief lives, and also a school and a dispensary.

Khanna.—Town in the Samrāla *tahsīl* of Ludhiāna District, Punjab, situated in 30° 42′ N. and 76° 13′ E., on the North-Western Railway, 27 miles from Ludhiāna town. Population (1901), 3,838. The town possesses two cotton-ginning factories, with a flour mill attached to one of them. The number of employés in the factories in 1904 was 145, and in the mill 30. Khanna is a dépôt for the agricultural produce of the neighbourhood. It contains an Anglo-Sanskrit middle school

(unaided) and a Government dispensary. The municipality was created in 1875. The income during the ten years ending 1902–3 averaged Rs. 6,400, and the expenditure Rs. 6,100. In 1903–4 the income was Rs. 6,600, chiefly derived from octroi; and the expenditure was Rs. 5,900.

Khānpur Tahsīl.—Head-quarters *tahsīl* of the Khānpur *nizāmat*, Bahāwalpur State, Punjab, lying on the left bank of the Indus, between 27° 43′ and 29° 4′ N. and 70° 27′ and 70° 53′ E., with an area of 2,415 square miles. The population in 1901 was 120,810, compared with 115,112 in 1891. It contains the towns of KHĀNPUR (population, 8,611), the head-quarters, GARHI IKHTIĀR KHĀN (4,939), and Ghauspur, which was created a municipality in 1903; and 52 villages. It is traversed by the Hakra depression, south of which comes the desert. To the north lie the central tract of barren soil and the fertile lowlands along the Indus. The *tahsil* is famous for its date-palms, and is, after Allahābād, the most fertile in the State. The land revenue and cesses in 1905–6 amounted to 1·8 lakhs.

Khānpur Town.—Head-quarters of the *nizāmat* and *tahsīl* of the same name in Bahāwalpur State, Punjab, situated in 28° 39′ N. and 70° 41′ E., on the North-Western Railway, 63 miles south-west of Bahāwalpur town. Population (1901), 8,611. Founded in 1806 by Nawāb Bahāwal Khān II as a counterpoise to Garhi Ikhtiār Khān, which lies 6 miles to the west, the town is now the chief centre of the trade in agricultural produce in the State, and contains three steam rice-husking mills, in one of which cotton-ginning is carried on as well. It possesses a middle school and a dispensary. The municipality had an income in 1903–4 of Rs. 12,800, chiefly from octroi.

Khānpur.—Name once given to GUJRĀNWĀLA TOWN in Gujrānwāla District, Punjab.

Khanspur.—Part of the Ghora Dakka cantonment in Hazāra District, North-West Frontier Province, situated in 34° 2′ N. and 73° 30′ E. During the summer months it is occupied by a detachment of British infantry.

Khānua.—Village in the Rūpbās *tahsīl* of the State of Bharatpur, Rājputāna, situated in 27° 2′ N. and 77° 33′ E., close to the left bank of the Bāngangā river, and about 13 miles south of Bharatpur city. Population (1901), 1,857. Here, in March, 1527, was fought the great battle between Bābar and the confederated Rājputs under Rānā Sangrām Singh of Mewār. In the preliminary skirmishes the latter were successful, and the emperor, deeming his situation serious, resolved to carry into effect his long-deferred vow and nevermore drink wine. The gold and silver goblets and cups were broken up and the fragments distributed among the poor. In the final battle (March 12, 1527) the Rājputs were completely defeated; the Rānā was wounded

and escaped with difficulty, while among the slain was Rāwal Udai Singh of Dūngarpur.

Khāpa.—Town in the Rāmtek *tahsīl* of Nāgpur District, Central Provinces, situated in 21° 25′ N. and 79° 2′ E., on the Kanhān river, 22 miles north of Nāgpur city, and 6 miles from the Chhindwāra road. Population (1901), 7,615. The town is built on a site high above the river and immediately overhanging it, while on the land side it is completely shut in by fine groves. Khāpa was constituted a municipality in 1867. The income during the decade ending 1901 averaged Rs. 6,500. In 1903–4 the income was Rs. 9,000, octroi being the principal head of receipt. Thirty years ago Khāpa was described as one of the most flourishing towns in the District, and its decrease in population is to be attributed to changes in the course of trade. Hand cotton-weaving, the principal local industry, is now declining owing to the competition of the mills. Khāpa is not favourably situated for the location of ginning and pressing factories, and is therefore being supplanted by its younger rivals in the centre of the cotton area. Cotton cloths in various colours for women are principally woven. Two weekly markets are held here, and the town contains a vernacular middle and a girls' school, and a dispensary.

Khāraghoda.—Village in the Viramgām *tāluka* of Ahmadābād District, Bombay, situated in 23° N. and 71° 50′ E., on the border of the Little Rann of Cutch. Population (1901), 2,108. At the time when Ahmadābād passed to the British, the eastern shore of the Little Rann contained five large salt-works in the possession of petty chiefs. These were gradually acquired by purchase between 1822 and 1840, and were subsequently closed in 1875 in favour of a single manufactory at Khāraghoda. This, however, proved unequal to meeting the constantly increasing demand for salt; and in 1881–2 new salt-works were opened at Ooru, which is 6 miles north of Khāraghoda and is connected with it by a line of rail. In 1904–5 the total out-turn of salt from these two works was 2,545,521 maunds, of which 2,313,965 maunds were sold. Khāraghoda is the head-quarters of two Assistant Collectors of Salt Revenue, one of whom is in charge of the works and the other of the preventive establishment which patrols a line extending from Dhanduka to Jamaiya. The town contains a dispensary, a library, a *dharmsāla*, and a market; and water is supplied by pipes from a tank built at a cost of 2¾ lakhs about a mile to the north of the town.

Kharagpur.—Village in the head-quarters subdivision of Monghyr District, Bengal, situated in 25° 7′ N. and 86° 33′ E. Population (1901), 2,442. The *pargana* named after it now forms part of the estates of the Mahārājā of Darbhangā. The village is best known for its irrigation works. These consist of a dam across the river Man,

by which its water is banked up in a valley in the hills, and about 28 square miles in the possession of the Rāj tenants are irrigated.

Kharakpur.—Village in the head-quarters subdivision of Midnapore District, Bengal, situated in 22° 20′ N. and 87° 21′ E. Population (1901), 3,526. It is an important junction on the Bengal-Nāgpur Railway, from which the East Coast section runs south to Madras, while the main line connects Calcutta with Bombay, and a branch runs north to Bānkurā and Jherriā. Kharakpur is 8 miles from Midnapore town, with which it is connected by road. In the village is the shrine of Pīr Lohāni, which is venerated by Hindus as well as by Muhammadans.

Kharakvāsla.—Artificial reservoir in Poona District, Bombay. *See* LAKE FIFE.

Khārān.—A quasi independent tribal area of the Kalāt State, Baluchistān, lying between 26° 52′ and 29° 13′ N. and 62° 49′ and 66° 4′ E., with an area of 14,210 square miles. It consists of a wide plain, irregularly quadrilateral in shape, and varying in elevation from 2,500 feet on the north-east to 1,600 feet on the west. It is bounded on the north by the RĀS KOH hills, on the south by the SIĀHĀN range; on the east by the Garr hills of the Jhalawān country; while on the west the boundary runs with Persia. The country is generally regarded as entirely desert; in reality, however, considerable tracts of cultivated land are situated at the foot of the hills and along the courses of the Baddo and Māshkel rivers. Most of the remainder of the country is covered by immense stretches of sand. The hydrography of the plain is peculiar. Torrents drain into it from the surrounding mountains, but find no outlet to the sea. Besides the Māshkel and Baddo, the only streams of importance are the Garruk or Sarāp and the Korakān.

The only part of Khārān that has been geologically examined is the Rās Koh range, the mass of which may be divided into three zones, the northern consisting mainly of intrusive rocks, the central of shales, and the southern of tall limestone ridges. The plain is covered in parts with alluvial deposit and elsewhere with sand. The botany of the country has never been studied. Trees are scarce, but the ravines contain quantities of tamarisk, of *Haloxylon ammodendron*, and in years of good rainfall many grasses. Among the latter may be mentioned *magher* (*Rumex vesicarius*), the seed of which is eaten as a famine food and is also exported. Another famine food consists of *kulkusht* (*Citrullus Colocynthis*), the seeds of which are made into bread. The surrounding hills produce asafoetida. Sind ibex and mountain sheep inhabit the hills, and 'ravine-deer' (gazelle) their skirts. Herds of wild asses are found in the neighbourhood of the Māshkel river. Snakes are numerous.

The climate is dry but healthy. Severe dust-storms are experienced throughout the year, being especially trying from June to September. The heat in summer is great, but the nights are always cool. The winter is cold. Most of the small amount of rain that falls is received between January and March.

Little is known of the history of the country previous to the end of the seventeenth century, when Ibrāhīm Khān, the Nausherwāni chief of Khāran, served the Ghilzai dynasty of Kandahār, except that it appears to have formed part of the Persian province of Kirmān. The Nausherwāni chiefs, round whom local history centres, claim descent from the Kiānian Maliks, and have always been a race of strong-willed, bold, and adventurous men, taking full advantage of their desert-protected country for organizing raiding expeditions against their neighbours, and professing a fitful allegiance to Persia, to Kalāt, and to Afghānistān in turn. The most famous were Purdil Khān, against whom Nādir Shāh had to send an expedition about 1734; and Azād Khān, who died in 1885. There is evidence that, in the time of Nādir Shāh, Khārān was still included in Kirmān; but Nasīr Khān I appears to have brought it under the control of Kalāt, and the country remained under that State until quarrels between Mīr Khudādād Khān and Azād Khān in the middle of the nineteenth century threw the latter into the arms of Afghānistan. In 1884 Sir Robert Sandeman visited Khārān, and succeeded in settling the chief points of difference between the chief and Khudādād Khān. Khārān was brought under the political control of the British, and an allowance of Rs. 6,000 per annum was given to the chief. The only Europeans who had previously visited Khārān were Pottinger, who marched through the whole length of the country in 1810; and Macgregor, who crossed the western end in 1877.

The principal objects of archaeological interest are tombs, attributed to the Kiānian Maliks, bearing large brick slabs on which are engraved rough representations of camels, horses, and other animals, the best preserved being at Gwachig in Dehgwar. Inscriptions, presumably Kufic, have been found in Jālwār and Kallag.

The normal population is about 19,000 persons, but it is estimated that 5,500 have recently emigrated. Almost all are nomads living in mat huts and blanket tents. The permanent villages number twenty. The head-quarters of the country are at Shahr-i-Kārez or Khārān Kalāt, which possesses a population of 1,500. Baluchī is the language of the majority, but in the east Brāhui is also spoken. The name usually applied by the people to themselves is Rakhshāni; but this term is strictly applicable only to the groups forming the majority, the remainder being Muhammad Hasnis, and miscellaneous groups such as Kambrānis, Gurgnāris, Chhanāls, Loris, and servile dependants. The dominant class, the Nausherwānis, consists of nine families,

Other Nausherwānis live in Makrān, where their quarrels with the Gichkīs have long been a thorn in the side of the Makrān administration. Camel-breeding and flock-owning are the principal occupations, in addition to agriculture. Felts, rugs in the *dari* stitch, and sacking are made by the women for home use. By religion the people are Sunni Muhammadans.

The country is divided into six *niābats*: Khārān with Sarawān, Gwāsh, Shimshān with Salāmbek, Hurmāgai including Jālwār, Māshkel, and Wāshuk with Palantāk. Rāghai and Rakhshān in Makrān also belong to the Khārān chief, and he holds lands in Panjgūr, Mashkai, and elsewhere in the Jhalawān country.

The greater part of the cultivable area is 'dry crop, dependent on flood irrigation. Four dams have been constructed in the Baddo river, and one each in the Korakān and the Garruk. The *niābats* of Khārān with Sarawān, Gwāsh, and Wāshuk with Palantāk possess a few irrigated lands. The alluvial soil is fertile when irrigated. The spring harvest consists of wheat with a little barley. In summer *jowār* and melons are grown. Wāshuk and Māshkel contain large date-groves. The system of planting the date-trees is peculiar, the root-suckers being placed in pits, dug to the depth of the moisture-bearing strata, which are kept clear of the wind-blown sand until the suckers have taken root, when the pits are allowed to fill. Camels, sheep, and goats form the live-stock of the country, and are sold in Afghānistān and many parts of Baluchistan. About 100 horses are kept by the chief. Bullocks are few in number. Good salt is obtained from Wād-i-Sultān and Wādiān in the Hāmūn-i-Māshkel.

Since the recent development of Nushki, much of the trade finds its way to that place. Trade is also carried on with Nāl in the Jhalawān country and Panjgūr in Makrān. The exports consist of *ghi* and wool, and the imports of piece-goods, tobacco, and grain, the latter chiefly from the Helmand valley. Sheep and goats are sent to Quetta and Karāchi. Tracks, possessing a moderate supply of water from wells, connect Shahr-i-Kārez with Ladgasht and thence with Panjgūr; with Nāl via Beseima; and with Panjgūr via Wāshuk.

Long periods of drought are common, causing the people to migrate. That such migrations were not unknown in former days also is indicated by a *sanad* from Ahmad Shāh Durrāni, which is still extant, permitting the Khārān chief to collect his scattered people from the adjoining countries. In recent years the rainfall has been constantly deficient and much emigration has taken place. The chief always keeps the granaries in his *niābats* full, and when scarcity occurs makes advances in grain without interest, which are recovered at the next harvest. This system is quite exceptional for Baluchistān.

In 1884 the chief consented to sit in Kalāt *darbars* with the Sarawān

division of the Brāhuis; but since then he has acquired a position of quasi-independence, and is directly controlled by the Political Agent in Kalāt. Each of the *niābats* already mentioned is in charge of a *naib*, whose business is to collect the revenue, pursue raiders and offenders, and report cases after inquiry to the chief or to his agent, known as the *shāhghāsi*. Civil cases are decided either by the chief or his agent, or by the *kāzī* at Khārān Kalāt in accordance with Muhammadan law. Order is maintained by a force of about 450 men, armed with swords, matchlocks, and breechloaders. About 170 of these form the garrison of Dehgwar, to prevent raids by the Dāmanis of the Persian border, and 69 are stationed in Rāghai and Rakhshān. In addition, all the tribesmen are liable to military service, when called upon. Those living near Shahr-i-Kārez and all sepoys must always keep ready for emergencies a skin of water, a pair of sandals, and a bag containing about 8 lb. of flour. The chief possesses three muzzle-loading cannon and a mortar.

Besides an allowance of Rs. 6,000 from the Government, the chief's revenue consists of his share of grain in kind; a poll-tax on some households; a goat, sheep, or felt from others; the equivalent of the price of one or two camels from certain groups; fines; unclaimed property; and transit dues. The aggregate income from local sources fluctuates with the character of the agricultural seasons, but probably amounts to about a lakh of rupees in a good year. The land revenue is levied at the rate of one-fourth to one-tenth of the produce. The chief's own lands are cultivated by his dependants and servants, who receive a share of the produce, generally one-fifth. The largest items of expenditure are incurred on the maintenance of the chief's permanent force, which is estimated to cost about Rs. 2,000 a month, and on the entertainment of guests, the system of Baloch hospitality obliging the chief to keep his house open to all comers.

Kharar.—*Tahsīl* of Ambāla District, Punjab, lying at the foot of the Himālayas, between 30° 34′ and 30° 56′ N. and 76° 22′ and 76° 55′ E., with an area of 370 square miles, and forming part of the Rūpar subdivision. The population in 1901 was 166,267, compared with 176,298 in 1891. It contains 369 villages, of which Kharar is the head-quarters. The land revenue and cesses in 1903-4 amounted to 3·1 lakhs. For administrative purposes the hill station of KASAULI (population, 2,192) and the town of KĀLKA (7,045) are included in this *tahsīl*. The northern part lies in the Siwāliks. Between the hills and the Ghaggar, in the east, is an unhealthy tract of jungle and rice-fields. The soil in the centre and west is a fertile loam, which in the south stiffens into clay. Communications are everywhere rendered difficult by the torrent-beds which intersect the country.

Kharār.—Town in the Ghātāl subdivision of Midnapore District,

Bengal, situated in 22° 40′ N. and 87° 44′ E. Population (1901), 9,508. Brass and bell-metal wares are extensively manufactured. Kharār was constituted a municipality in 1888. The income and expenditure during the decade ending 1901–2 averaged Rs. 3,500 and Rs. 3,600 respectively. In 1903–4 the income was Rs. 4,800, derived mainly from a tax on persons (or property tax); and the expenditure was Rs. 4,100.

Kharāri.—Town in Sirohi State, Rājputāna. *See* Abu Road.

Kharda.—Town in the Jāmkhed *tāluka* of Ahmadnagar District, Bombay, situated in 18° 38′ N. and 75° 29′ E., 56 miles south-east of Ahmadnagar city. Population (1901), 5,930, including a hamlet of 798. In 1795 an engagement took place near here between the Marāthās and the Nizām. The general of the latter, being defeated, retreated to Kharda, where he was completely hemmed in, and constrained to accede to an ignominious treaty. The town contains upwards of 500 substantial merchants, shopkeepers, and money-lenders, many of whom carry on a large trade in grain, country cloth, and other articles. Kharda belonged to the Nimbālkar, one of the Nizām's Marāthā nobles, whose handsome mansion in the middle of the town is now in ruins. In 1745 the Nimbālkar built a fort to the south-east of the town. The fort is square, in good repair, being built with cut stone walls 25 or 30 feet high, and is surrounded by a ditch, now in ruins. The walls have a massive gateway, and two gates at right angles to each other. The cattle market on Tuesday is the largest in the District. The municipality, which was constituted in 1890, had an average income during the decade ending 1901 of Rs. 2,400. In 1903–4 the income was also Rs. 2,400.

Khardah.—Village in the Barrackpore subdivision of the District of the Twenty-four Parganas, Bengal, situated in 22° 44′ N. and 88° 22′ E., on the left bank of the Hooghly river. Population (1901), 1,777. Khardah is a favourite place of pilgrimage for Vaishnavas, who visit it in honour of Nityānanda, one of the disciples of Chaitanya, who took up his residence here. His descendants are regarded as *gurūs*, or spiritual guides, by the Vaishnavas. There is a fine temple, containing the image of Syām Sundar, a name for the god Krishna. The village lies within the South Barrackpore municipality, and is a station on the Eastern Bengal State Railway Shoe-brushes and bricks are manufactured on a large scale.

Khargon.—Head-quarters of the Nimār district, Indore State, Central India, situated in 21° 50′ N. and 75° 37′ E., on the left bank of the Kundī river, a tributary of the Narbadā. Population (1901), 7,624. Khargon appears to have been founded under the Mughals. It was the chief town of a *mahāl* in the Bijāgarh *sarkār* of the *Sūbah* of Mālwā, and later on became the chief town of the *sarkār*. Its importance in

those days is shown by the remains of large houses and numerous tombs Besides the district and *pargana* offices, a jail, a school, a dispensary, a public library, and a State post office are situated in the town. Local affairs are managed by a municipality, with an income of Rs. 500, chiefly derived from octroi and other taxes.

Kharlā.—River of Bengal, another name for the JALANGĪ

Khāriān.—*Tahsīl* of Gujrāt District, Punjab, lying between 32° 31′ and 33° 1′ N. and 73° 35′ and 74° 12′ E., with an area of 646 square miles. The Jhelum river divides it on the north-west from Jhelum District, while on the north-east a fixed boundary has now been laid down between this *tahsīl* and Kashmīr territory. The greater part consists of a slightly undulating plain, well wooded, highly cultivated, and intersected by nullahs, especially towards the east. The Pabbī Hills run north-east and south-west, roughly parallel to the Jhelum river. The southern face of the range is steep, but towards the river the slope is more gradual. The population in 1901 was 242,687, compared with 248,076 in 1891. It contains the town of DINGA (population, 5,412) and 507 villages, including Khāriān, the head-quarters. The land revenue and cesses in 1903–4 amounted to 2·9 lakhs. LĀLA MŪSA railway junction is situated in this *tahsīl*.

Kharsāwān.—Feudatory State of Chotā Nāgpur, Bengal, lying between 22° 41′ and 22° 53′ N. and 85° 38′ and 85° 55′ E., with an area of 153 [1] square miles. It is bounded on the north by the Districts of Rānchī and Mānbhūm; on the east by the State of Saraikelā; and on the south and west by Singhbhūm District. The river Sonai flows through the State from north-west to south-east. The country on the north and the Kolhān *pīr* on the south of this river consist of long ranges of jungle-clad hills, attaining in one place an elevation of 2,529 feet. The depressions between them are terraced for cultivation. The rest of the State is a lowland tract, dotted here and there with isolated small hills. In this part, almost the whole of the cultivable area has been cleared of forest and turned into rice lands. Iron is found in a nodular form in most of the hilly ranges. Gold is found in very small quantities in the sands of the Sonai river. Copper must once have been extracted on a very large scale in Kharsāwān, and traces of ancient mines can be seen at intervals throughout the whole breadth of the State for a length of 15 miles; the most extensive were in the neighbourhood of Lopso. Recent prospecting operations indicate that the supply of copper is still far from exhausted, and it is probable that in the near future the State may once more become an important mining centre. Nodular limestone, a stalagmitic deposit called *asurhad*, slate, and potstone are found in the hilly tracts. About 40 square

[1] This figure, which differs from the area shown in the *Census Report* of 1901, was supplied by the Surveyor-General.

miles of the State are covered with forest, containing chiefly *sāl* (*Shorea robusta*), *āsan* (*Terminalia tomentosa*), *gamhār* (*Gmelina arborea*), *kusum* (*Schleichera trijuga*), *piāsāl* (*Pterocarpus Marsupium*), *kend* (*Diospyros melanoxylon*), *jāmun* (*Eugenia Jambolana*), and bamboos. Minor jungle products comprise lac, *tasar* cocoons, and myrabolams. Tigers, leopards, bears, several kinds of deer, hares, and peafowl abound in the forests. Snakes of several kinds are common everywhere.

The chief of Kharsāwān belongs to a junior branch of the Porāhāt Rājā's family. Some generations before the establishment of British rule, Kunwār Bikram Singh, a younger brother of the Rājā, obtained from him as a maintenance grant the eleven *pīrs* which constitute the present States of Saraikelā and Kharsāwān. Bikram Singh by his two wives left five sons. The eldest succeeded to Saraikelā, and the second son, from whom the present chief is directly descended, to Kharsāwān. The State first came under the notice of the British in 1793, when, in consequence of disturbances on the frontier of the old Jungle Mahāls, the Thākur of Kharsāwān and the Kunwār of Saraikelā were compelled to enter into certain agreements relating to the treatment of fugitive rebels. The chief is bound, when called upon, to render service to the British Government, but he has never had to pay tribute. His present *sanad* was granted in 1899. He exercises all administrative powers, executive and judicial, subject to the control of the Deputy-Commissioner of Singhbhūm and the Commissioner of Chotā Nāgpur, and is empowered to pass sentences of imprisonment up to five years and of fine to the extent of Rs. 200. Sentences of imprisonment for more than two years require the confirmation of the Commissioner. Heinous offences calling for heavier punishment are dealt with by the Deputy-Commissioner of Singhbhūm. The present chief, Srī Rām Chandra Singh Deo, being a minor, the State is, for the time being, under direct British administration.

The population increased from 35,470 in 1891 to 36,540 in 1901, the density being 239 persons per square mile. The inhabitants dwell in 263 villages, the most important of which is Kharsāwān, the head-quarters of the State. Hindus number 19,864 and Animists 16,277, the Hos being the most numerous tribe. About 78 per cent. of the population are supported by agriculture. The principal crops grown in the State in order of importance are rice, maize, pulses, mustard, sugar-cane, and tobacco. Coarse cotton cloths and iron cooking utensils are manufactured for local use, and in some villages leaf mats are made. The chief exports are rice, pulses, oilseeds, stick-lac, *tasar* cocoons, and iron; and the chief imports are salt, cotton thread, cotton piece-goods, tobacco, and brass cooking utensils. Trade has been stimulated by the opening of the Bengal-Nāgpur Railway, which runs through 12 miles of the State boundary; a station at Amdā

is 3 miles from its head-quarters. The State contains 8 miles of metalled and 28 miles of unmetalled roads. The total revenue is Rs. 42,000, of which Rs. 17,000 is derived from the land. The police force consists of 4 officers and 13 constables, and there is a jail with accommodation for 11 prisoners. The State also maintains a dispensary, a middle English school, and two lower primary schools.

Khārsi.—*Thakurāt* in the BHOPĀL AGENCY, Central India.

Kharsiāng.—Subdivision and town in Darjeeling District, Bengal. *See* KURSEONG.

Khāsi and Jaintiā Hills.—District in Eastern Bengal and Assam, lying between 24° 58′ and 26° 7′ N. and 90° 45′ and 92° 51′ E., with an area of 6,027 square miles. The District, which forms the central section of the watershed between the valleys of the Brahmaputra and the Surmā, is bounded on the north by Kāmrup and Nowgong; on the east by Nowgong and Cāchār; on the south by Sylhet; and on the west by the Gāro Hills. To the north the hills rise gradually from the Brahmaputra Valley in a succession of low ranges, covered with dense evergreen forest; but on the south the Khāsi Hills spring immediately from the plain to a height of 4,000 feet, and form a level wall along the north of the Surmā Valley. The Jaintiā Hills slope more gently to the plain, but these also have no low outlying ranges. The southern and central portions of the District consist of a wide plateau between 4,000 and 6,000 feet above sea-level, the highest point of which, the Shillong peak, rises to 6,450 feet. On the north towards Kāmrūp are two similar plateaux of lower elevation. The general appearance of these table-lands is that of undulating downs. They are covered with short grass, but destitute both of the dense forest and of the high jungle with one or other of which waste land in Assam is almost invariably covered. Here and there are to be seen clumps of oak and pine, the hills are broken up with deep gorges and smiling valleys, and the scenery is not unlike that found in many parts of England. A considerable number of rivers rise in the hills, but are of little importance as a means of communication within the boundaries of the District. The largest streams flowing towards the north are the KAPILI, Barpāni, UMIAM or Kiling, and DIGRU, all of which fall either direct or through other channels into the Kalang in Nowgong; and the Khri, which is called the KULSI in Kāmrūp. To the south the best-known rivers are the Lubha, BOGĀPĀNI, and Kynchiang or JĀDUKĀTA. Where they flow through the plateau, the larger rivers have cut for themselves deep gorges of great beauty, whose precipitous sides are generally clothed with forest.

Physical aspects.

The Shillong plateau consists of a great mass of gneiss, which is bare on the northern border, but in the central region is covered by tran-

sition or sub-metamorphic rocks. To the south, in contact with the gneiss and sub-metamorphic, is a great volcanic outburst of trap, which is stratified and brought to the surface south of Cherrapunji. Still farther south are Cretaceous and Nummulitic strata, which contain deposits of coal and lime.

The characteristic trees of the central plateau are those of a temperate zone. At an elevation of 3,000 feet the indigenous pine (*Pinus Khasya*) predominates over all other vegetation, and forms almost pure pine forests. The highest peaks are clothed with fine clumps of oak, chestnut, magnolia, beech, and other trees, which superstition has preserved from the axe of the wood-cutter. Azaleas and rhododendrons grow wild, and many kinds of beautiful orchids are found in the woods.

Wild animals include elephants, bison (*Bos gaurus*), tigers, bears, leopards, wild dogs, wild buffaloes in the lower ranges, and various kinds of deer.

The climate is cool and pleasant. In the hottest weather the thermometer at Shillong rarely rises above 80°, and in the winter ice often forms. Snow seldom falls, but this is partly due to the fact that there is little or no precipitation of moisture in the cold season. Malaria lurks in the low ranges of hills on the north, but the climate of the high plateau is extremely healthy, and is admirably adapted to European constitutions.

There is no station in India where the recorded rainfall is as heavy as at CHERRAPUNJI, on the southern face of the Khāsi Hills. The average annual fall at this place is 458 inches: but the clouds are rapidly drained of their moisture, and at Shillong, which is less than 30 miles away, it is only 82 inches. At Jowai, which lies at about the same distance south-east of Shillong, the average annual fall is 237 inches. The rainfall has never been recorded in the northern hills, but it is probably between 80 and 90 inches in the year. The District has always been subject to earthquakes, but all previous shocks were thrown into insignificance by the catastrophe of June 12, 1897. The whole of SHILLONG was levelled with the ground, masonry houses collapsed, and roads and bridges were destroyed all over the District. The total number of lives lost was 916. Most of these casualties occurred in the cliff villages near Cherrapunji, and were due to the falling of the hill-sides, which carried villages with them or buried them in their ruins.

History.

On ethnological grounds there are reasons for supposing that the Khāsis and Syntengs have been established in these hills for many centuries; but, living as they did in comparative isolation in their mountain strongholds, little is known of their early history. At the end of the eighteenth century

they harried the plains on the north and south of the District, and their raids were thus described by Pemberton in 1835:—

'They descended into the plains both of Assam and Sylhet, and ravaged with fire and sword the villages which stretched along the base of this lofty region. Night was the time almost invariably chosen for these murderous assaults, when neither sex nor age were spared[1].'

The Khāsi Hills were first visited by Europeans in 1826, when Mr. David Scott entered into arrangements with the chiefs for the construction of a road through their territory from Assam into Sylhet. Work was begun; but in 1829 the Khāsis took alarm at the threats of a Bengali *chaprāsi*, who declared that the hills were to be brought under taxation. The tribes suddenly rose and massacred two European officers, Lieutenants Bedingfield and Burlton, near Nongkhlao, with about 60 of their native followers. Military operations were at once commenced, but were protracted through several seasons, and it was not till 1833 that the last of the Khāsi chiefs tendered his submission. Engagements were then entered into with the heads of the various Khāsi States. Their independence was recognized, Government abstained from imposing any taxation upon their subjects, and their territories were held to be beyond the borders of British India. Since that date the history of the Khāsi States has been one of peaceful development, only checked by the great earthquake of 1897. The Jaintiā Hills lapsed to the British Government in 1835, when the Rājā was deprived of the JAINTIĀ PARGANAS in the District of Sylhet, on account of his complicity in the murder of three British subjects. For the next twenty years the Syntengs, as the inhabitants of the Jaintiā Hills are called, were left almost entirely to their own devices. The administration was entrusted to their own headmen, who were undoubtedly corrupt; but the only tax levied was that dating from the Rājā's time, which consisted of one male goat from each village. In 1860 a house tax was imposed, as in the other hill tracts of the Province, and within a few months the people rose in open rebellion. Fortunately, a large force of troops was close at hand, and before the revolt could make headway it was stamped out. Scarcely, however, had the agitation subsided when the income tax was introduced into the hills. The total amount assessed was only Rs. 1,259, and the highest individual assessment Rs. 9; but this was enough to irritate a people who had never been accustomed to pay anything but the lightest of tribute to their own princes, and who had never been taught by conquest the extent of the British resources. In January, 1862, a revolt began; and, though apparently crushed in four months, it broke out again, and it was not till November, 1863, that the last of the

[1] *Report on the Eastern Frontier of British India*, by Captain R. B. Pemberton, p. 221 (Calcutta, 1835).

leaders surrendered, and the pacification of Jaintiā could be said to be complete. Since that date a British officer has been posted in the Jaintiā Hills, and the people have given no trouble. Cherrapunji was originally selected as the head-quarters of the hills, but the rainfall was found to be so excessive that the District officer moved to Shillong in 1864; and Shillong was constituted the head-quarters of the Administration when Assam was formed into a separate Province ten years later.

The population of the District, as returned at the last four enumerations, was: (1872) 140,356, (1881) 167,804, (1891) 197,904, and (1901) 202,250. The slow rate of increase which occurred during the last decade was due to the unfavourable

Population.

conditions prevailing after the earthquake of 1897. The first two enumerations were probably incomplete. The District contains two subdivisions, SHILLONG and JOWAI, with head-quarters at places of the same names. Shillong (population, 8,384) is the only town, and there are 1,839 villages.

The following table gives for each subdivision particulars of area, population, &c., according to the Census of 1901:—

Subdivision.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Shillong	3,941	1	1,199	134,329	34	+ 0·7	11,478
Jowai	2,086	..	640	67,921	33	+ 5·2	
District total	6,027	1	1,839	202,250	34	+ 2·2	11,478

About 88 per cent. of the population of 1901 were still faithful to their tribal religion, 3 per cent. were Hindus, and nearly all the remainder Christians. The female element in the population is very large, and there were 1,080 women to every 1,000 men enumerated in 1901, a fact which is probably connected with the independent position enjoyed by women. Of the total population, 59 per cent. spoke Khāsi, a language which belongs to the Mon-Anam family, and 27 per cent. Synteng. The principal tribes were Khāsis (107,500), Syntengs, a cognate tribe in the Jaintiā Hills (47,900), and Mikīrs (12,800). The proportion of the population supported by agriculture, 76 per cent., is comparatively low for Assam; but the Khāsis are keen traders, and ready to earn money in any honest way.

The Khāsis and Syntengs, like the other tribes of Assam, are descendants of the great Indo-Chinese race, whose head-quarters are supposed to have been in North-Western China between the upper waters of the Ho-ang-ho and the Yang-tse-kiang. They are, however,

thought to belong to one of the earliest bands of immigrants, and their language is quite unlike any other form of tribal speech now found in Assam, but is connected with the Mon-Khmer language used by various tribes in Anam and Cambodia. While the rest of the horde pressed onwards towards the sea, the Khāsis remained behind in their new highland home, and for many centuries have maintained their nationality intact, though surrounded on every side by people of a different stock. The tribe is subdivided into a large number of exogamous clans, which are in theory composed of persons descended from the same female ancestor. Each clan possesses distinctive religious rites, and a special place in which the uncalcined bones are buried after cremation. Politically, they are divided into a large number of petty States, most of which are ruled by a chief, or Siem, and some of which have less than 1,000 inhabitants. The Siemship usually remains in one family, but the succession was originally controlled by a small electoral body, constituted from the heads of certain priestly clans. Of recent years there has been a tendency to broaden the elective basis, and the constitution of a Khāsi State has always been of a very democratic character, a Siem exercising but little control over his people.

In personal appearance the Khāsis are short and sturdy, with great muscular development of the leg. The features are of a distinctly Mongolian type, with oblique eyes, a low nasal index, and high cheek bones. They are of a cheerful, friendly disposition, but, though peaceful in their habits, are unused to discipline or restraint.

Among many of the north-east frontier tribes there is little security of life and property, and the people are compelled to live in large villages on sites selected for their defensive capabilities. The Khāsis seem, however, to have been less distracted by internal warfare, and the villages, as a rule, are small. The houses are low, with roofs nearly reaching to the ground, and are usually made of wooden planks. They are not built on platforms, as is commonly the case with the hill tribes; but the floor is often made of boards, and the roofs of the well-to-do are covered with corrugated iron or oil tins beaten flat. The interior is generally divided into two compartments.

The men usually wear a sleeveless cotton shirt, a loin-cloth, and a wrap, and on their heads a turban, or a curious cloth cap with a peak over the forehead. The women are well clad in chemises and body-cloths, and both sexes often wear stockings with the feet cut off. The costumes brought out on gala days are most elaborate. The men wear silk loin-cloths and finely embroidered coats, while the women appear in really handsome silk cloths of different colours. The jewellery is massive, but handsome, consisting of silver coronets and pendants and heavy necklaces of coral and lac overlaid with gold. Their

weapons are bows and arrows, with which they are always practising, swords, and shields. Their staple diet is dried fish and rice; but they eat, when they can afford it, pork, beef, and any kind of game. Dog, however, they avoid, as, according to their legends, he was created to be the companion of man and his assistant in the chase. They drink large quantities of liquor, prepared from rice and millet, both fermented and distilled, and continually chew *pān*.

At a marriage the parties are pronounced man and wife in the presence of their friends, and a feast usually follows. The essential part of the ceremony consists in the mixing of liquor from two different gourds, representing the two contracting parties, and the eating by the bride and groom out of the same plate. The bride at first remains in her mother's house, where she is visited by her husband; but when children are born, the parents, if they continue satisfied with one another, set up housekeeping together. This union between the sexes, however, can be terminated by mutual consent; and as the initial ceremony costs but little, a man is not deterred from changing his wife by the expense of obtaining a new partner. Divorce is very common, and is effected by a public declaration, coupled with the presentation by the man to the woman of five cowries or copper coins, which she returns to him with five similar coins of her own. He then throws them away. The public proclamation is occasionally dispensed with, and the marriage dissolved by the simple tearing of a *pān* leaf. The facility with which divorce can be obtained renders adultery or intercourse prior to marriage uncommon. Marriage, in fact, is merely a union of the sexes, dissoluble at will, and the people have no temptation to embark on secret intrigues. A woman who commits adultery is, moreover, regarded with extreme disfavour, and, according to the Khāsi code of morals, there is only one thing worse, and that is to marry in one's own clan. A widow is allowed to remarry, but not into the family of her late husband, a practice exactly the converse of that prevailing in the Gāro Hills, to the west.

The Khāsis burn their dead, each clan or family having its own burning-ground. Two arrows are shot, one to the east and the other to the west, to protect the dead man, and a cock is sacrificed, which is supposed to show the spirit the way to the other world, and to wake him at dawn so that he may pursue his journey. The bones are subsequently collected from the pyre and removed to the common burial-place of the tribe. The stones erected to the memory of the dead form a special feature, being very numerous and often of great size: the largest are as much as 27 feet in height with an average breadth of nearly 7 feet. These monuments are of two kinds, some being tall upright monoliths, others flat slabs resting on smaller stones about 18 inches high. The monoliths are generally placed in rows,

the central stone being erected in memory of the maternal uncle and one on either side in honour of the deceased and the deceased's father. As with all monuments, these stones are erected near villages and paths, where they will be most often seen. The matriarchal theory is in full force, and inheritance goes through the female line. A Siem is usually succeeded by his uterine brothers, and failing them by his sisters' sons. If he has no such nephews, the succession falls to his first cousins or grandnephews, but only to such as are cognates, his own sons and his kinsmen through the male line having no claim at all to the inheritance. So long as a man remains in his mother's house, whether married or unmarried, he is earning for his mother's family, and his mother or sisters and their children are his heirs. If, however, he is living separately with his wife, she and her daughters are entitled to succeed.

The natural religion of the Khāsis, like that of most of the hill tribes, is somewhat vague and ill defined. They believe in a future state, but do not trouble themselves much about it. Misfortunes are attributed to evil spirits, and steps are at once taken to ascertain who is offended, and how he best may be propitiated. One of their most curious superstitions is that of the *thlen.* The tradition runs that there was once in a cave near Cherrapunji a gigantic snake or *thlen*, which caused great havoc among men and animals At last, one man took with him to the cave a herd of goats, and offered them one by one to the monster. The snake soon learnt to open its mouth to be fed at a given signal, and the man then made a lump of iron red hot, threw it into its mouth, and thus killed it. The body was then cut up and eaten, but one small piece remained, from which sprang a multitude of *thlens*. These *thlens* attach themselves to different families, and bring wealth and prosperity, but only if they are from time to time fed on human blood. To satisfy this craving a human being must be killed, and the hair, the tips of the fingers, and a little blood offered to the snake. Many families are known or suspected to be *ri thlen*, or keepers of the *thlen*, and murders are not unfrequently committed in consequence of this awful superstition.

The people have shown themselves extremely receptive of Christianity, but have little taste for Hinduism. One of their chief characteristics is a dislike of all restraint, including the restraint of tradition, which is of such binding force among most of the inhabitants of the East. There are few people less conservative than the Khāsis, and they are ever ready to take up a novelty. To this healthy spirit of enterprise is due the marked progress they have made in the development of material comfort, and the extent to which they have outstripped the other tribes on the north east frontier in their progress towards civilization.

The Syntengs are very closely allied to the Khāsis in language, religion, and customs. They are, however, less sturdily built and have darker complexions, the result, in all probability, of closer connexion with the plains. They owned allegiance to the Jaintiā Rājā, whose local representatives were twelve *dollois* or headmen; but he received little in the way of tribute, and it is doubtful whether his influence in the hills was ever very strong.

The Welsh Presbyterian Mission, which has been established in these hills since 1841, has met with a large measure of success. The schools of the District are under the management of this society, which has succeeded not only in converting, but in imparting the elements of instruction to, a large proportion of the animistic population. In 1903 they had nine centres in the hills, at which twenty-one missionaries were employed. Of recent years a Roman Catholic mission has started work. The total number of native Christians in the District at the Census of 1901 was 17,125.

Agriculture.

The soil of the Khāsi Hills consists of a stiff clay, often indurated with particles of iron, which in its natural state is far from fertile. Manure is accordingly much prized, and cow-dung is carefully collected and stored. Towards the east, the land becomes more fertile, and is often a rich black loam, and manure is not so necessary. In the more level valleys, in which the central plateau abounds, rice is grown in terraces and irrigated; and such fields are also found on the northern margin of the District, wherever the conformation of the surface admits of them. Water is run on these fields in winter, to keep the soil soft and free from cracks. Elsewhere, the crop is raised on the hill-side. Turf and scrub are dug up, arranged in beds and burnt, and seed is sown in the ashes which serve as manure. In addition to rice, the principal crops are maize, job's-tears (*Coix Lacryma*), various kinds of millet and pulse, and a leguminous plant called *sohphlang* (*Flemingia vestita*), which produces large numbers of tubers about the size of pigeons' eggs among its roots. Cotton is grown in the forest clearings to the north, and oranges, bay leaves, areca-nut, and pine-apples on the southern slopes of the hills. This portion of the District was much affected by the earthquake of 1897, and many valuable groves were destroyed by deposits of sand.

There are no statistics to show the area under cultivation, but the Khāsis are energetic and enterprising farmers, and readily adopt fresh staples that seem likely to yield a profit. Potatoes were first introduced in 1830, and were soon widely cultivated. In 1882 nearly 5,000 tons of this tuber were exported from the hills, but a few years later blight appeared, and there has since been a great decrease in the exports. An experimental farm has been started near Shillong, and new varieties

of potato introduced, which have been readily adopted by the Khāsis. Peach- and pear-trees are grown in the higher hills, and efforts have recently been made to acclimatize various kinds of English fruit. A serious obstacle is, however, to be found in the heavy rainfall of May and June, and only early-ripening varieties are likely to do well.

The cattle are fat and handsome little animals, much superior to those found in the plains. The cows yield little milk, but what they give is very rich in cream. The Khāsis do not milk their cows, and in many places do not use the plough, cattle being chiefly kept for the sake of the manure they yield, and for food. Ponies are bred, which in appearance and manners are not unlike the sturdy little animals of Bhutān. Pigs are kept in almost every house, and efforts have been recently made to improve the breed by the introduction of English and Australian animals.

Two square miles of pine forest near Shillong have been formally reserved, and there is a 'reserved' forest 50 square miles in area at Saipung in the south-east corner of the Jaintiā Hills. This forest is said to contain a certain quantity of *nahor* (*Mesua ferrea*) and *sam* (*Artocarpus Chaplasha*), but up to date it has not been worked. Pine and oak are the predominating trees in the higher plateaux; but this portion of the District is very sparsely wooded, the trees having been killed out by forest fires and shifting cultivation. The ravines on the southern face of the hills and the low hills to the north are, however, clothed with dense evergreen forest. The area of these forests is not known, but there is very little trade in timber.

Minerals.

The mineral wealth of the District consists of coal, iron, and limestone. Iron is derived from minute crystals of titaniferous iron ore, which are found in the decomposed granite on the surface of the central dike of that rock, near the highest portion of the plateau. The iron industry was originally of considerable importance, but is now almost extinct. Cretaceous coal is found at Maobehlarkhar, near Maoflang, which is worked by the villagers in a primitive way for the supply of the station of Shillong. Another outcrop occurs at Lāngrin on the Jādukāta river. Nummulitic coal is found at Cherrapunji, Lākādong, Thanjināth, Lynkerdem, Maolong, and Mustoh. The Maolong field, which is estimated to contain 15,000,000 tons of good workable coal, has lately been taken on lease by a limited company. Limestone is found all along the southern face of the hills as far as the Hāri river, but it can only be economically worked where special facilities exist for its transport from the quarries to the kiln. Altogether thirty-four limestone tracts are separately treated as quarries. The most important are those situated on the Jādukāta and Panātirtha rivers, the Dwārā quarries, the Shellā quarries on the Bogāpāni, the quarries which lie immediately under

Cherrapunji, and the Utma quarries a little to the east on an affluent of the Piyain. The stone is quarried for the most part during the dry months, and rolled down to the river banks. When the hill streams rise, it is conveyed in small boats over the rapids, which occur before the rivers issue on the plains. Below the rapids it is generally reloaded on larger boats and carried down to the Surmā river, on the banks of which it is burnt into lime during the cold season. The earthquake of 1897 considerably increased the difficulties of transport, and the lime business has of recent years been suffering from a depressed market. The output in 1904 amounted in round figures to 123,000 tons. The quarries are worked by private individuals, usually themselves Khāsis, employing local labour. Stone quarries are also worked in the Jaintiā Hills. Government realized in royalties in 1903–4 about Rs. 12,000 from lime, and Rs. 1,600 from coal.

The manufactures of the District are not important. Handsome but rather heavy jewellery is made to order, and the Khāsis manufacture rough pottery and iron hoes and *daos*, or hill knives. Cloths and jackets are woven in the Jaintiā Hills from thread spun from the *eri* silkworm, and from cotton grown in the *jhūms*. Bamboo mats and cane baskets and sieves are also made.

Trade and communications.

The hillmen are keen traders, and a considerable proportion of the people earn their living by travelling from one market to another. The chief centres of business are at Cherrapunji, Laitlyngkot, Shillong, Jowai, and a market on the border of Sylhet near Jaintiāpur. The principal exports are potatoes, cotton, lac, sesamum, oranges, bay-leaves, areca-nuts, and lime. The imports are rice and other food-grains, general oilman's stores, cotton piece-goods, kerosene oil, corrugated iron, and hand-woven cotton and silk cloths from the plains. There are a few Mārwāri merchants at Shillong, but they have no shops in the interior of the District, where trade is left in the hands of the Khāsis and Syntengs.

An excellent metalled cart-road runs from Gauhāti to Cherrapunji, via Shillong, a distance of 97 miles. The gradients between Shillong and Gauhāti have been most carefully adjusted, and a tonga and bullock-train service is maintained between these two towns. Except in the immediate neighbourhood of Shillong, few roads are suitable for wheeled traffic; but in 1903–4 there were altogether 356 miles of bridle-paths in the District.

The District is divided into two subdivisions, SHILLONG and JOWAI. Shillong is the head-quarters of the Deputy-Commissioner and the summer head-quarters of the Local Government. The Jowai subdivision is in charge of a European Subordinate Magistrate. In addition to these officers, an Assistant

Administration.

Magistrate is stationed at Shillong, and an Engineer who is also in charge of Kāmrūp District. The Jaintiā Hills, with Shillong, and 34 villages in the Khāsi Hills, are British territory. The rest of the Khāsi Hills is included in twenty-five petty Native States, which have treaties or agreements with the British Government. These States vary in size from KHYRIM, with a population of 31,327, to NONGLEWAI, with a population of 169. Nine of these States had a population of less than 1,000 persons in 1901.

The High Court at Calcutta has no jurisdiction in the hills, except over European British subjects. The Codes of Civil and Criminal Procedure are not in force, and the Deputy-Commissioner exercises powers of life and death, subject to confirmation by the Lieutenant-Governor. Petty criminal and civil cases, in which natives of the District are concerned, are decided by the village authorities. Serious offences and civil suits in which foreigners are concerned are tried by the Deputy-Commissioner and his Assistants. There is, on the whole, very little serious crime in the District, but savage murders are occasionally committed.

Land revenue is assessed only on building sites and on flat rice land in the Jaintiā Hills, which pays Rs. 1-14 per acre. The principal source of revenue in British territory is a tax of Rs. 2 on each house.

The revenue from house-tax and total revenue is shown in the following table, in thousands of rupees:—

	1880-1.	1890-1	1900-1.	1903-4.
Revenue from house-tax	15	27	27	28
Total revenue	71*	1,15	1,35	1,44

* Exclusive of forest revenue.

There are police stations in the hills, at Shillong, Cherrapunji, and Jowai, and an outpost at Nongpoh, half-way between Shillong and Gauhāti. The force has a sanctioned strength of 23 officers and 183 men, who are under the immediate charge of the Deputy-Commissioner, but ordinary police duties are discharged by the village officials. The only jail in the District is at Shillong: it has accommodation for 78 prisoners.

Thanks to the efforts of the Welsh Presbyterian Mission, education has made considerable progress, and in 1901 the proportion of literate persons (5·7 per cent.) was higher than that in any District in Assam. The number of pupils under instruction in 1880-1, 1890-1, 1900-1, and 1903-4 was 2,670, 3,582, 6,555, and 7,275 respectively. The Khāsi Hills owes its position to the spread of female education, 3·4 per cent. of the women being able to read and write, as compared with 0·4 per cent. in Assam as a whole. In 1903-4 there were

348 primary, 8 secondary schools, and one special school in the District. The number of female scholars was 2,395. The great majority of the pupils under instruction were only in primary classes. Of the male population of school-going age 28 per cent. were in the primary stage of instruction, and of the female population of the same age 14 per cent. The total expenditure on education was Rs. 1,21,000, of which Rs. 7,000 was derived from fees; about 40 per cent. of the direct expenditure was devoted to primary schools.

The District possesses two hospitals and four dispensaries, with accommodation for 23 in-patients. In 1904 the number of cases treated was 25,000, of whom 200 were in-patients, and 500 operations were performed. The expenditure was Rs. 10,000, the greater part of which was met from Provincial revenues.

Vaccination is compulsory only in Shillong town, and has been somewhat neglected in the District. In 1903-4 only 28 per 1,000 of the population were protected, as compared with 44 per 1,000 in Assam as a whole.

[A. Mackenzie, *History of the Relations of the Government with the Hill Tribes of the North-East Frontier of Bengal* (Calcutta, 1884); W. J. Allen, *Report on the Administration of the Cossyah and Jynteah Hill Territory* (Calcutta, 1858); J. D. Hooker, *Himalayan Journals* (1854); B. C. Allen, *District Gazetteer of the Khāsi and Jaintiā Hills* (1906); Major P. R. T. Gurdon, *The Khāsis* (1907).]

Khāspur.—Village in the Silchar subdivision of Cāchār District, Eastern Bengal and Assam, situated in 24° 55′ N. and 92° 57′ E., near the southern face of the Barail range. This was the capital of the Rājās of Cāchar from the beginning of the eighteenth century to the death of the last Rājā in 1830. While living here the Kāchāris came under the influence of Hinduism, and in 1790 the Rājā and his brother entered the body of a copper image of a cow and emerged as Kshattriyas. The only traces of the former capital are to be found in the remains of four temples, two other buildings, and three tanks. The village is no longer of any importance.

Khatao.—*Tāluka* of Sātara District, Bombay, lying between 17° 18′ and 17° 48′ N. and 74° 14′ and 74° 51′ E., with an area of 501 square miles. There are 85 villages, but no town. The head-quarters are at Vadūj. The population in 1901 was 96,416, compared with 95,223 in 1891. The density, 241 persons per square mile, is almost equal to the District average. The demand for land revenue in 1903-4 was 1·4 lakhs, and for cesses Rs. 12,000. Khatao is a northerly continuation of the Khānāpur plateau, and consists of the valley of the Yerla, which, rising at the northern point of the *tāluka*, flows southward through it. Of the two ranges of hills which enclose the valley, the western range is the higher, while the eastern rises but little above the Khatao upland.

The rainfall, which averages 20 inches annually at Vadūj, is scanty and fitful; but the climate is fairly healthy.

Khatauli.—Town in the Jānsath *tahsīl* of Muzaffarnagar District, United Provinces, situated in 29° 17′ N. and 77° 44′ E., on the North-Western Railway and on the road from Meerut to Roorkee. Population is increasing steadily, and was 8,695 in 1901. The town is of some age, and contains four large Jain temples and a large *sarai* built by Shāh Jahān. It first became of importance during the Bihār famine of 1874, when all the surplus grain in the District was exported from the railway station. The streets have recently been paved and masonry drains constructed. Khataulī is administered under Act XX of 1856, with an income of about Rs. 3,000. Its trade is chiefly connected with the export of grain and sugar, and is largely in the hands of Jain merchants. The *tahsīli* school has 64 pupils, and an aided Jain school 38.

Khātmāndū.—Capital of Nepāl. *See* KĀTMĀNDU.

Khed Tāluka (1).—*Tāluka* of Poona District, Bombay, including the petty subdivision (*petha*) of Ambegaon, and lying between 18° 37′ and 19° 13′ N. and 73° 31′ and 74° 10′ E., with an area of 876 square miles. There are two towns, KHED (population, 3,932), the head-quarters, and ALANDI (2,019); and 242 villages, including GHOD (5,720) and MANCHAR (5,300). The population in 1901 was 156,275, compared with 162,391 in 1891. The density, 179 persons per square mile, is slightly below the District average. The demand for land revenue in 1903-4 was 2·3 lakhs, and for cesses Rs. 18,000. There are two large chains of hills, one in the north and the other in the south. The east is a series of table-lands crossed by mountains and hills, the country becoming rapidly more rugged as it approaches the Western Ghāts. Most of the soil is red or grey. The Māval or west has little 'dry-crop' tillage. Khed contains the largest forest area in the District. The climate is generally good. The annual rainfall averages about 26 inches.

Khed Town.—Head-quarters of the *tāluka* of the same name in Poona District, Bombay, situated in 18° 51′ N. and 73° 53′ E., on the left bank of the Bhīma river, 26 miles north of Poona city. Population (1901), 3,932. Khed has an area of upwards of 20 square miles, within which limits are at least three places of interest from an architectural or archaeological point of view, namely, the tomb and mosque of Dilāwar Khān, an old Hindu temple of Siddheswar on the left bank of the Bhīma river, and a temple of Tukai-devī some centuries old a few yards to the right of the Poona-Nāsik road. The mosque is a graceful specimen of Musalmān carved stone-work. The town contains a Sub-Judge's court, a dispensary, and one school with 171 boys and 25 girls. The municipality was established in 1863. For the

decade ending 1901 the average income was Rs. 3,000. In 1903-4 the income was Rs. 3,500, chiefly derived from a house tax. A branch of the Church Missionary Society, stationed here, carries on evangelistic work in the *tāluka*.

Khed Tāluka (2).—North-eastern *tāluka* of Ratnāgiri District, Bombay, lying between 17° 33′ and 17° 54′ N. and 73° 20′ and 73° 42′ E., with an area of 392 square miles. It contains 146 villages, including KHED (population, 5,053), the head-quarters; but no town. The population in 1901 was 95,594, compared with 100,550 in 1891. The decrease is ascribed to a virulent cholera epidemic and considerable emigration during the fair season. The density, 244 persons per square mile, is much below the District average. The demand for land revenue in 1903-4 was Rs. 86,000, and cesses Rs. 6,000. The *tāluka* consists of a rugged and hilly surface, with patches of poor land. The north-west is much broken by ravines; in the north-east are three hills, Mahīpatgarh, Sumārgarh, and Rasālgarh, detached from the Western Ghāts by the deep valley of the Jagbudi. The principal passes across the Ghāts are the Hātlot and the Amboli, the latter passable by pack-bullocks. The village sites are protected by shade giving trees; near the villages are numerous sacred groves. The river Jagbudi is navigable by small craft as far as Khed. The greater part of the *tāluka* lies beyond the influence of the sea-breeze, and is consequently very hot during March, April, and May. The annual rainfall is heavy, averaging about 143 inches.

Khed Village.—Head-quarters of the *tāluka* of the same name in Ratnāgiri District, Bombay, situated in 17° 43′ N. and 73° 24′ E., at the head of the Jagbudi river, and surrounded by hills. Population (1901), 5,053. A cart-road connects Khed with the port of Harnai, 26 miles distant. Boats of light draught work up from Dābhol and Anjanvel to Khed. East of the village are three small rock temples. The place contains a dispensary, and two schools with 150 boys and 9 girls.

Kheda.—District and town in Bombay. *See* KAIRA.

Khejri.—Village in Midnapore District, Bengal. *See* KEDGEREE.

Khekrā.—Town in the Bāghpat *tahsīl* of Meerut District, United Provinces, situated in 28° 52′ N. and 77° 17′ E., 26 miles west of Meerut city. Population (1901), 8,918. It is said to have been founded 1,600 years ago by Ahīrs, who were ousted by Jāts from Sikandarpur. In the Mutiny the owners rebelled, and the land was confiscated. The place is administered under Act XX of 1856, with an income of about Rs. 2,000. It is rising in importance as a centre of the grain and sugar trade. There is a primary school with 60 pupils.

Khelāt.—State and town in Baluchistān. *See* KALĀT.

Khem Karan.—Town in the Kasūr *tahsīl* of Lahore District, Punjab, situated in 31° 9′ N. and 74° 34′ E., 7 miles from Kasūr town, on the

North-Western Railway. Population (1901), 6,083. The Kasūr branch of the Bāri Doab Canal flows near the town, and the population, which is mainly agricultural, is well-to-do. The municipality was created in 1867. The income during the ten years ending 1902–3 averaged Rs. 5,200, and the expenditure Rs. 4,800. In 1903–4 the income was Rs. 5,700, chiefly derived from octroi; and the expenditure was Rs. 6,200. The town has a vernacular middle school, maintained by the municipality.

Kherāli.—Petty State in KĀTHIĀWĀR, Bombay.

Kherālu Tāluka.—North-eastern *tāluka* of the Kadi *prānt*, Baroda State, with an area of 246 square miles. The population fell from 98,682 in 1891 to 76,463 in 1901. The *tāluka* contains three towns, KHERĀLU (population, 7,617), the head-quarters, VADNAGAR (13,716), and UMTA (5,242); and 88 villages. It is level throughout, and is fairly well wooded. The surface soil is for the most part sandy, but there is a little black soil. The Khāri flows through it from east to west. The land revenue in 1904–5 was Rs. 42,000.

Kherālu Town.—Head-quarters of the *tāluka* of the same name, Kadi *prānt*, Baroda State, situated in 23° 54′ N. and 72° 39′ E., on the Gaikwār's State line from Mehsāna on the Rājputāna-Mālwā Railway. Population (1901), 7,617. The town contains a magistrate's court, a dispensary, two *dharmsālas*, local offices, and a vernacular school, and is celebrated for the temple founded by the Vaishnavite reformer Vallabhāchārya, who is said to have dwelt here. It is administered by a municipality, which receives an annual grant of Rs. 1,600 from the State.

Kherāvāda (*Khedāvāda*).—Petty State in MAHĪ KĀNTHA, Bombay.

Kherī District (*Khīrī*).—Northern District of the Lucknow Division, United Provinces, lying between 27° 41′ and 28° 42′ N. and 80° 2′ and 81° 19′ E., with an area of 2,963 square miles. In shape it is roughly triangular, the flattened apex pointing north. The District is bounded on the north by the river Mohan, separating it from Nepāl; on the east by the Kauriāla river, separating it from Bahraich; on the south by Sītāpur and Hardoī Districts; and on the west by Pīlībhīt and Shāhjahānpur. An old bed of the Sārdā or Chaukā, called the Ul, which again joins that river, divides Kherī into two portions. The area lying north-east of the Ul is a wild tract of country, which forms practically a vast river-bed in which the Sārdā has worn several channels. The widely scattered village sites are perched on the highest ground available, and in the north stretch large areas of forest. During the rains the old channels fill with water, and the courses of the rivers vary from year to year. The greatest volume of water is carried by the Sārdā or Chaukā, which divides into two branches on the southern border. One

Physical aspects.

of these, called the Dahāwar, forms, for a short distance, the boundary between Kherī and Sītāpur, and flows into the Kauriāla. North of the Sārdā lies an old bed called the Sarjū or Suhelī, which also discharges into the Kauriāla and receives many small tributaries from the north. The portion of the District lying south-west of the Ul is drier and more stable, but is also traversed by a number of streams, of which the most important are the Sarāyān, Kathnā, and Gumtī, while the Sukhetā flows along the south-west border. The District is studded with many lakes, which in the north-east take the form of deep pools marking the beds of old channels of the rivers, while in the south-west they are large shallow swamps or sheets of water, drying up in the hot season.

The District exposes nothing but alluvium, and *kankar* or nodular limestone is the only stony formation.

Kherī contains the luxurious vegetation found in the damp submontane tract. Besides the forests, which chiefly produce *sāl* and will be described separately, groves of mangoes are common, and there are a few areas of *dhāk* (*Butea frondosa*) and other scrub jungle.

The large forest area gives shelter to many wild animals. Tigers, bears, and wolves are not rare, while leopards, wild dogs, hyenas, jungle-cats, and jackals are more common. Five species of deer are found, the swamp deer being the commonest, and a fair number of antelope, and great quantities of *nīlgai* and hog. Game-birds are in abundance. Fish are plentiful, and mahseer are caught in all the large rivers.

South-west of the Ul the country is generally healthy. The strip of jungle along the Kathnā is still malarious, but is gradually being reclaimed. North-east of the Ul, and especially beyond the Chaukā, the climate is exceedingly damp and feverish. The District generally is comparatively cool, and enjoys a mean annual temperature of about 79°.

The rainfall is high; the annual average amounts to 46 inches, the south-west receiving less than the north-east. Variations from year to year are considerable, and the total has fluctuated from 70 inches to 24.

History.

Traditions point to the inclusion of this tract in the realm of the Lunar race of Hastināpur, and several places are associated with episodes in the Mahābhārata. The early history is, however, entirely unknown. The northern part was held by Rājputs in the tenth century, and tradition relates that they dispossessed the Pāsīs and other aboriginal tribes. Musalmān rule spread slowly to this remote and inhospitable tract; and it was probably not before the fourteenth century that a chain of forts was constructed along the northern frontier, to prevent the incursions of marauders from Nepāl. Under Akbar the District formed part of the *sarkār* of KHAIRĀBĀD in the *Sūbah* of Oudh. The later history is merely that of the rise and decline of individual families, and is

of purely local importance. When ROHILKHAND was ceded to the British in 1801 part of this District was included in the cession, but it was restored to Oudh after the Nepālese War of 1814–6. On the annexation of Oudh in 1856 the west of the present area was formed into a District called Muhamdī and the east into Mallānpur, which also included part of Sītāpur. A year later Muhamdī became one of the chief centres of disaffection in northern Oudh. The refugees from Shāhjahānpur reached Muhamdī on June 2, and two days later that place was abandoned; but the whole party, with few exceptions, were shot down on the way to Sītāpur, and the survivors died or were murdered later at Lucknow. The British officials at Mallānpur, with a few who had fled from Sītāpur, escaped to Nepāl, where most of them died. No real attempt to recover the District was made till October, 1858, but peace was restored before the end of that year. The head-quarters of the single District then formed were moved to Lakhīmpur shortly afterwards.

Many villages contain ancient mounds in which fragments of sculpture have been found, Balmiār-Barkhār and Khairīgarh being the most remarkable. A stone horse found near Khairīgarh bears an inscription of Samudra Gupta, king of Magadha, dated in the fourth century A.D. GOLĀ possesses a celebrated temple.

Population.

There are 5 towns and 1,659 villages. Population is increasing steadily. At the four enumerations the numbers were: (1869) 738,089, (1881) 831,922, (1891) 903,615, (1901) 905,138. The District is divided into three *tahsīls*—MUHAMDĪ, NIGHĀSAN, and LAKHĪMPUR—each named after its head-quarters. The municipality of LAKHĪMPUR, the 'notified area' of MUHAMDĪ, and the town of GOLĀ are the principal places. The following table gives the chief statistics of population in 1901:—

Tahsīl.	Area in square miles.	Number of		Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
		Towns.	Villages.				
Muhamdī	651	1	607	257,989	396	– 0.2	5,296
Nighāsan	1,237	2	386	281,123	227	+ 0.6	3,609
Lakhīmpur	1,075	2	666	366,026	340	+ 0.1	7,326
District total	2,963	5	1,659	905,138	305	+ 0.2	16,231

About 86 per cent. of the total population are Hindus and nearly 14 per cent. Musalmāns. Between 1891 and 1901 the District suffered both from floods and from droughts, and the rate of increase was thus smaller than in previous decades. The density of population

is the lowest in Oudh. Eastern Hindī is the language principally spoken.

Kherī is remarkable for the small proportion of high-caste Hindus found in it. Brāhmans number only 65,000 and Rājputs 30,000. The most numerous castes are Chamārs (tanners and cultivators), 104,000; Kurmīs (agriculturists), 82,000; Pāsīs (toddy-drawers and cultivators), 69,000; Ahīrs (graziers and cultivators), 60,000; Lodhas (cultivators), 44,000; and Muraos (market-gardeners), 34,000. Among Musalmāns are Julāhās (weavers), 20,000; Pathāns, 16,000; Rājputs, 12,000; Shaikhs, 11,000; and Behnās (cotton-carders), 11,000. The Banjārās of this District number 6,800, found only in the submontane tracts. They are largely carriers of grain. Kurmīs, Brāhmans, Rājputs, Muraos, Chamārs, and Pāsīs are the principal cultivators. Agriculture supports as many as 77 per cent. of the total population.

Out of 417 native Christians in 1901, 337 were Methodists. The American Methodist Mission, opened in 1862, has a number of branches in the District.

Agriculture.

Kherī is divided by its rivers into four tracts of varying conditions. The south-west corner between the Sukhetā and the Gumtī consists of fertile loam, which turns to sand along the Gumtī. Between the Gumtī and the Kathnā lies a high sandy tract called the Parehār, in which cultivation is extremely precarious, but which is celebrated as a breeding-ground for cattle. The richest part of the District is included between the Kathnā and the Ul, where the soil is a rich loam. Beyond the Ul, cultivation shifts over wide tracts. The floods of the Kauriāla usually deposit coarse, infertile sand, while the Sārdā and Dahāwar bring down finer silt in which rice can be grown.

The tenures in Kherī are those commonly found in OUDH. Of the total area, 71 per cent. is held by *tālukdārs*, but only a very small area is sub-settled. Most of the rest is included in *zamīndāri mahāls*. The main agricultural statistics for 1903-4 are given below, in square miles:—

Tahsīl.	Total.	Cultivated.	Irrigated.	Cultivable waste.
Muhamdi . .	651	406	99	161
Nighāsan . .	1,237	439	1	297
Lakhīmpur . .	1,075	529	76	215
Total	2,963	1,374	176	673

Wheat is the crop most largely grown, covering 343 square miles or 25 per cent. of the area cropped. Rice (230), maize (208), barley (157), gram (151), *kodon* (148), and pulses (138) are also important. Sugar-cane (49) and oilseeds (50) are the chief non-food crops.

The District was very backward at the time of the first regular settlement, but in thirty years the cultivated area had increased by 18 per cent. A series of bad seasons from 1892 to 1896 reduced cultivation considerably; but in 1903–4 the area was 25 per cent. greater than it had been forty years before. There has also been a rise in the area double cropped. The area under sugar-cane, wheat, and rice has increased to some extent, but the improvement in the kind of staple grown is not so marked as elsewhere. The demand for advances under the Land Improvement and Agriculturists' Loans Acts is small, except in unfavourable years. Only Rs. 88,000 was lent during ten years ending 1900, and half of this sum was advanced in the famine year, 1897. Practically no loans have been given since 1900.

Kherī is the most important centre for cattle-breeding in the United Provinces. It supplies a large number of draught bullocks to the whole of Oudh and the Gorakhpur Division. The most distinctive breed is called Parehār, from the tract of country where it is found. The bullocks are small, but fiery tempered, fast movers, and very enduring. Other breeds are the Bhūr, Khairīgarh, Majhra, Singāhī, and Dhaurahrā, which are larger and coarser. During the hot season cattle are taken in large numbers to graze in the jungles of Nepāl. Ponies are numerous, but of a very inferior type, and are chiefly kept as pack-animals. Sheep and goats are kept for meat, and for their wool and hair.

Only 176 square miles were irrigated in 1903–4, of which 109 were supplied by wells, 60 by tanks or *jhīls*, and 7 by other sources. Irrigation is practically confined to the south-west of the District, excluding the Parehār tract, in which there is hardly any. The spring-level is high, and the *dhenklī* or lever is used to raise water from wells. Irrigation from *jhīls* is carried on by the swing-basket.

'Reserved' forests cover an area of 443 square miles in the north of the District. The chief timber tree is *sāl* (*Shorea robusta*); but the forests also contain *asaina* (*Terminalia tomentosa*), *haldu* (*Adina cordifolia*), *khair* (*Acacia Catechu*), and other valuable species. The minor products include fuel, thatching-grass, and grass used as fibre. In 1903–4 the total revenue from forest produce was 2·6 lakhs, the receipts from timber being the most important item. The forests are included in the Kherī division of the Oudh circle.

Kankar is the only mineral product, and is used for making lime and metalling roads. It is, however, scarce and of poor quality, as is usual in the submontane Districts.

The most important industry is sugar-refining, and this is only carried on south-west of the Gumtī. Cotton cloth for local use is woven at a few places, and at Oel there is a small manufacture of brass utensils.

The District exports grain, sugar, forest produce, cattle, and *ghi*, while the chief imports are piece-goods, metals, and salt. There is also some trade with Nepāl, from which timber, rice, and spices are received. The principal trading centres are Lakhīmpur, Muhamdī, and Golā.

Trade and communications.

The Lucknow-Bareilly State Railway (managed by the Rohilkhand and Kumaun Railway) crosses the District south-west of the Ul. From Mailānī a branch strikes off through the forest to Maraunchā Ghāt on the Sārdā, which is crossed by a temporary bridge, the line being continued from the opposite bank to Sonārīpur. A short branch of this line from Dudhwā to the Nepāl frontier, opened in 1903, is used chiefly for the export of grain and forest produce. The whole line from Mailānī is open only from January to June. The Pawāyān steam tramway, which connects Mailānī with Shāhjahānpur, has a short length in the District.

Communications by road are very poor. Only 40 miles are metalled out of a total length of 656. About 250 miles are maintained by the Public Works department, but the cost of all but 17 miles is charged to Local funds. The chief metalled road is that from Sītāpur to Shāhjahānpur, which passes through the south-west corner of the District, and the other metalled roads are merely short lengths of feeder-roads to railway stations. The improvement of communications, and in particular the construction of bridges, is rendered difficult by the vagaries of the streams which intersect the District. Avenues of trees are maintained on only 8 miles.

Owing to the natural moisture of the soil and the rarity of a serious failure of the rainfall, scarcity from drought is not severely felt in this District. Distress was experienced in 1769, and tradition relates that in 1783 there was severe famine and many deaths occurred from starvation. Scarcity was again felt in 1865, 1869, and 1874. In 1878 relief works and poorhouses were opened, but were not much resorted to. Up to that time the difficulties of transport had added to the distress caused by a local failure of the crops; but the railway, opened in 1887, now makes it possible to import grain when needed. From 1892 to 1895 excessive rain injured the crops in the low-lying parts of the District. The drought of 1896 thus caused an increase in the cultivated area north-east of the Ul, though it was followed by a contraction in the area under spring crops in 1897. Relief works and poorhouses were opened, but famine was not severe.

Famine.

The Deputy-Commissioner is assisted by a staff of three Deputy-Collectors recruited in India, and a *tahsīldār* resides at the head-quarters of each *tahsīl*. A Deputy-Conservator of Forests is stationed at Lakhīmpur.

Administration.

The civil courts are those of the Munsif and Subordinate Judge, and the District is included in the Civil and Sessions Judgeship of Sītāpur. Crime is generally light, though thefts and burglaries are common, owing to the fact that the houses in many parts are simply wattle sheds. The jungle along the Kathnā formerly had a bad reputation for sheltering criminals. An attempt has been made, with only partial success, to reclaim the criminal tribe known as Bhātūs or Sānsiās by settling them on the land. Female infanticide was formerly rife, but is no longer suspected.

The records of the first summary settlement made after annexation perished in the Mutiny. It is, however, certain that under it the *tālukdārs* lost few villages. After the Mutiny a second summary settlement was made on the basis of the accounts under native rule, the demand amounting to 4·9 lakhs. A survey was commenced in 1864 and a regular settlement followed, which was completed by 1872. The assessments were based on estimates of produce and on selected rent rates, while they also anticipated a great extension of cultivation and proved too high. The necessity for revision was increased by a succession of bad years, and the whole settlement was again examined between 1872 and 1877, with the result that the demand was reduced from 12·2 to 8 lakhs. The settlement officers sat as civil courts to determine claims to rights in land, but their work was lighter here than in most Districts of Oudh. A new settlement, preceded by a resurvey, was made between 1897 and 1900, and was characterized by speed and economy. Rents are payable in kind over a large area, and the valuation of this portion of the District was made by ascertaining the actual receipts over a series of years. In some cases rents are paid by cash rates on the area actually cultivated in each harvest, and for the finer staples cash rents are invariably paid. The demand fixed amounted to 10·3 lakhs, which represented 46 per cent. of the estimated net 'assets.' In different parts of the District the incidence varies from Rs. 2 to R. 0·4, the average being R. 0·7.

Collections on account of land revenue and revenue from all sources have been, in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4
Land revenue . .	7,44	8,30	9,03	9,86
Total revenue . .	8,39	11,02	12,42	14,47

The District contains one municipality, LAKHĪMPUR, one 'notified area,' MUHAMDĪ, and two towns administered under Act XX of 1856. Local affairs beyond the limits of these are managed by the District board, which in 1903–4 had an income and expenditure of 1·1 lakhs

About half the income is derived from rates, and the expenditure included Rs. 58,000 spent on roads and buildings.

The District Superintendent of police has under him a force of 3 inspectors, 85 subordinate officers, and 256 constables, distributed in 12 police stations; and there are also 44 municipal and town police, and 1,762 rural and road police. The District jail contained a daily average of 286 prisoners in 1903.

Kherī is one of the most backward Districts in the United Provinces in regard to education, and only 1·8 per cent. of the population (3·3 males and 0·2 females) could read and write in 1901. The number of public schools increased from 95 with 3,430 pupils in 1880–1 to 116 with 4,046 pupils in 1900–1. In 1903–4 there were 162 such schools with 5,676 pupils, of whom 189 were girls, besides 4 private schools with 61 pupils. Three schools are maintained by Government and 89 are managed by the District and municipal boards. The total expenditure on education in the same year was Rs. 40,000, of which Rs. 34,800 was provided from Local funds and Rs. 4,400 by fees.

There are 8 hospitals and dispensaries, with accommodation for 39 in-patients. In 1903 the number of cases treated was 46,000, including 415 in-patients, and 1,988 operations were performed. The expenditure amounted to Rs. 10,000, chiefly met from Local funds.

About 13,000 persons were successfully vaccinated in 1903–4, representing a proportion of 34 per 1,000 of population. Vaccination is compulsory only in the municipality of Lakhīmpur.

[S. H. Butler, *Settlement Report* (1901); H. R. Nevill, *District Gazetteer* (1905).]

Kherī Town (*Khīrī*).—Town in the Lakhīmpur *tahsīl* of Kherī District, United Provinces, situated in 27° 54′ N. and 80° 48′ E., on the Lucknow-Bareilly State Railway. Population (1901), 6,223. Kheri is a place of some antiquity, and contains a fine tomb built over the remains of Saiyid Khurd, who died in 1563. It is administered under Act XX of 1856, with an income of about Rs. 800. Though giving its name to the District, it is of small importance. A daily market is held, and the town contains a branch of the American Methodist Mission and a school with 144 pupils.

Kherī-Rājāpur.—*Thakurāt* in the MALWĀ AGENCY, Central India.

Kherwāra (1).—Cantonment included in the fifth or Mhow division of the Western Command of the Indian army, and situated in 23° 59′ N. and 73° 36′ E., in the south-west corner of the State of Udaipur, Rājputāna, about 50 miles south of Udaipur city. It stands in a valley 1,050 feet above the sea, and on the banks of a small stream called the Godāvari. Population (1901), 2,289. Kherwāra is the head-quarters of the Mewār Bhīl Corps, which was raised between 1840 and 1844,

with the objects of weaning a semi-savage race from its predatory habits, giving them honourable employment, and assisting the Mewār State in preserving order. The uniform of the Bhīl sepoy of those early days was a scanty loin-cloth (he would wear no other); his arms were a bow and arrows; and his distrust and suspicion was such that he would serve for daily pay only, deserting if that were withheld. Throughout the Mutiny of 1857 the corps remained staunch. At that time a squadron of Bengal cavalry was stationed here, and left in a body for Nīmach after endeavouring to persuade the Bhīls to join them. The latter followed up the squadron, killed every man, and brought back their horses and accoutrements to Kherwāra. A detachment operated against Tāntiā Topī's adherents in Bānswāra and Partābgarh, and gained the Mutiny medal. The corps received its colours in 1862, and was placed under the Commander-in-Chief in 1897. It consists of eight companies (seven of Bhīls and one of Hindustānis), and furnishes detachments at Kotra, Udaipur city, and the town of Dūngarpur. Much good has been effected by the enlistment of these hillmen; and, through the influence of those in the service and of the numerous pensioners in the districts, the Bhīls have largely forsaken their predatory habits. During the famines of 1899–1900 and 1901–2 the corps did excellent work in hunting down dacoits and keeping order generally. Besides the regimental school and hospital, the cantonment contains a school maintained by the Church Missionary Society, which has a branch here, and a hospital with accommodation for 10 in-patients, which is kept up from private subscriptions and a grant from the Darbār. The commandant of the Bhīl Corps is also Political Superintendent of the Hilly Tracts, a wild country, comprising the two *bhūmiāts* or districts of Kherwāra and KOTRA, containing altogether 361 villages and 34,296 inhabitants, almost all of whom are Bhīls. The villages are for the most part held by petty Girāsia chiefs, who pay a small tribute or quit-rent to the Mewār Darbār. The principal chiefs in the Kherwāra district are the Raos of Jawās, Pāra, and Mādri.

Kherwāra (2).– *Thakurāt* in the MĀLWA AGENCY, Central India.

Khetri.—Head-quarters of the chiefship of the same name in Jaipur State, Rājputāna, situated in 28° N. and 75° 47′ E., about 80 miles north of Jaipur city. Population (1901), 8,537. The town is picturesquely situated in the midst of hills, and is difficult of access, there being only one cart-road and two or three bridle paths into the valley in which it stands. It is commanded by a fort of some strength on the summit of a hill 2,337 feet above sea-level. In the town the Rājā maintains an Anglo-vernacular high school attended by 66 boys, a Hindī school attended by 112 boys, and a hospital with accommodation for 6 in-patients. There are also 5 indigenous schools, and

a combined post and telegraph office. In the immediate neighbourhood are valuable copper-mines, which, about 1854, yielded an income of Rs. 30,000, but which, owing to the absence of proper appliances for keeping down the water and a scarcity of fuel, have not been worked for many years. Nickel and cobalt have been found; but these minerals are quarried principally at Babai, about 7 miles to the south, the ore being extensively used for enamelling and exported for this purpose to Jaipur, Delhi, and other places. The chiefship, which lies partly in the Shekhāwati and partly in the Torāwati *nizāmat*, consists of 3 towns—KHETRI, CHIRĀWA, and KOT PŪTLI—and 255 villages; and the population in 1901 was 131,913, Hindus forming nearly 92 per cent. and Musalmāns 8 per cent. In addition, the Rājā has a share in 26 villages not enumerated above, and possesses half of the town of SINGHĀNA. The town and *pargana* of Kot Pūtli are held as a free grant from the British Government, while for the rest of his territory the Rājā pays to the Jaipur Darbār a tribute of Rs. 73,780. The normal income of the estate is about 5·3 lakhs, and the expenditure 3·5 lakhs.

Khetur.—Village in the head-quarters subdivision of Rājshāhi District, Eastern Bengal and Assam, situated in 24° 24′ N. and 88° 25′ E. Population (1901), 440. It enjoys a high repute for sanctity from its having been visited by Chaitanya, the great Hindu religious reformer of the sixteenth century, in whose honour a temple has been erected in the village. A religious fair held annually in October is attended by 25,000 persons.

Khewra.—Salt mines in Jhelum District, Punjab. *See* MAYO MINE.

Khiaoda.—*Thakurāt* in the GWALIOR RESIDENCY, Central India.

Khiching.—Village in Mayūrbhanj, one of the Orissa Tributary States, Bengal, situated in 21° 55′ N. and 85° 50′ E. Population (1901), 269. It contains archaeological remains, such as statues, pillars, mounds, and the ruins of several brick and stone temples. A group of temples adjoining the village is of great interest. One of the temples (to Siva) seems to have been repaired in the time of Mān Singh, Akbar's Hindu general, to whom another (unfinished) temple should probably be ascribed.

[*Archaeological Survey Reports*, vol. xiii, pp. 74–6.]

Khijadia.—Petty State in KĀTHIĀWĀR, Bombay.

Khijadia Dosāji.—Petty State in KĀTHIĀWĀR, Bombay.

Khijadia Najani.—Petty State in KĀTHIĀWĀR, Bombay.

Khilchipur State.—Mediatized chiefship in Central India, under the Bhopāl Agency, lying between 23° 52′ and 24° 17′ N. and 76° 26′ and 76° 42′ E., with an area of about 273 square miles. It is bounded on the north by the Kotah State of the Rājputāna Agency; on the east by Rājgarh; on the west by Indore; and on the south by Narsinghgarh. The State is situated in the district of Mālwā known as

Khīchīwāra, mainly in the Deccan trap area, but over its more northern portion sandstones of the Kaimur and other allied series are exposed. The climate is temperate, the annual rainfall averaging about 32 inches.

The chiefs are Khīchī Rājputs, a section of the great Chauhān clan. This State was founded in 1544 by Ugrasen, who was forced by family dissensions to migrate from the Khīchī capital of Gāgraun. A grant of land was subsequently made to him by the Delhi emperor, which included the adjoining Zirāpur and Māchalpur *parganas*, now a part of Indore State, and Shujālpur, now in Gwalior. This territory was lost in 1770, when Abhai Singh was obliged to make terms with Sindhia. At the time of the settlement of Mālwā in 1819 a dispute existed regarding the succession, which at the request of the Gwalior Darbār was settled by the mediation of the British authorities, Dīwān Sher Singh succeeding as a boy of five. He was followed in 1869 by his nephew Amar Singh, who received the hereditary title of Rao Bahādur in 1873. In 1884 he abolished all transit duties in the State, except those on opium. The present chief, Bhawāni Singh, succeeded in 1899. The Rao Bahādur of Khilchipur is entitled to a salute of 9 guns.

The population was: (1881) 36,125, (1891) 36,302, and (1901) 31,143, giving a density of 114 persons per square mile. The State contains one town, KHILCHIPUR (population, 5,121), the capital: and 283 villages. Hindus number 29,258, or 94 per cent.; Musalmāns, 1,051, or 3 per cent.: and Animists, 796, mostly Bhīls. The chief castes and tribes are Sondhiās, 4,900: Dhākads, 3,800: Deswālis (allied to Sondhiās), 3,070; Chamārs, 2,550; Dāngīs, 2,500; Lodhas, 2,340; and Rājputs, 2,210.

The soil in the south-west is of the fertile black variety, bearing good crops of all the ordinary grains; but the northern portions are covered with a rough stony soil of little agricultural value. Of the total area, 84 square miles, or 31 per cent., are cultivated, of which 5 square miles are irrigable; 80 square miles are under forest; 46 square miles, or 17 per cent., are cultivable but not cultivated; and the rest is waste. *Jowār* occupies 38 square miles, or 44 per cent. of the cultivated area; cotton, 4 square miles; poppy, 2 square miles; and wheat, 1 square mile.

The State is divided for administrative purposes into three *tahsīls*, each under a *tahsīldār*. The chief has full powers in civil and revenue matters, but all serious cases of crime are dealt with by the Political Agent in Bhopāl. The total revenue amounts to about 1·1 lakhs, of which Rs. 85,000 is derived from land, Rs. 11,000 from *tānka*, and Rs. 10,000 from customs dues, including Rs. 2,000 from opium. The principal heads of expenditure are: Rs. 7,000 on the chief's establishment, Rs. 4,000 on general administration, Rs. 10,000 on army and police, and Rs. 3,000 on public works. A tribute of Rs. 12,625, formerly

made direct to Sindhia, has been since 1844 paid to the British Government through the Political Agent, in adjustment of Sindhia's contribution towards the local corps in Mālwā. The land revenue is farmed out and is realized in British coin, which has been legal tender since 1898. The State keeps up a small force of regular infantry, 161 strong, as a body-guard to the chief. There are also 25 horse and 288 foot, who act as police, and serve 4 guns. A British post office, a school, and a hospital are maintained at the chief town.

Khilchipur Town.—Chief town of the State of the same name in Central India, situated in 24° 3′ N. and 76° 35′ E., about 1,400 feet above the level of the sea, in the rugged country at the foot of the arm of the Vindhyas which strikes eastwards from Chitor to Chanderī. The name was originally Khīchīpur; and the corruption may be due to an attempt on the part of the Muhammadan rulers to substitute Khiljīpur, the name under which the town is mentioned in the *Ain-i-Akbarī*. Population (1901), 5,121. A British post office, a jail, a school, and a hospital are situated in the town. Khilchipur is connected with the Agra-Bombay high road by a feeder-road, 25 miles long, whence traffic passes to Guna station on the Bīna-Bāran branch of the Great Indian Peninsula Railway, 53 miles distant.

Khipro.—*Tāluka* of Thar and Pārkar District, Sind, Bombay, lying between 25° 26′ and 26° 15′ N. and 69° 3′ and 70° 16′ E., with an area of 2,249 square miles. Population in 1901 was 54,681, compared with 47,199 in 1891. The density, 24 persons per square mile, is almost equal to the District average. The *tāluka* contains 125 villages, the head-quarters being at Khipro. The land revenue and cesses in 1903-4 amounted to nearly 2 lakhs. Excepting the desert portion, known as Rānāhu *tapa*, the *tāluka* is irrigated by the Mithrao Canal and the Dhoro Nāro.

Khirasra.—Petty State in KATHIĀWĀR, Bombay.

Khirpai.—Town in the Ghātāl subdivision of Midnapore District, Bengal, situated in 22° 43′ N. and 87° 37′ E. The population in 1901 was 5,045, compared with 8,046 in 1872. The decrease is due to the ravages of the Burdwān fever. Khirpai was constituted a municipality in 1876. The income and expenditure during the decade ending 1901-2 averaged Rs. 2,300. In 1903-4 the income was Rs. 4,100, mainly derived from a tax on persons (or property tax); and the expenditure was Rs. 3,450.

Khojak (*Kozhak*).—An historic pass across the Khwāja Amrān offshoot of the TOBA-KĀKAR mountains in the Quetta-Pishīn District, Baluchistān. It lies in 30° 51′ N. and 66° 34′ E., 70 miles from Quetta by rail. From Kila Abdullah, on the south, there is a gradual ascent to Shelabāgh, whence the summit (7,457 feet) is reached in 3¾ miles. A cart-road through the pass connects Kila Abdullah with Chaman. At

Shelabāgh the railway runs through the Khojak tunnel, which is just under 2½ miles long, and cost rather less than 70 lakhs of rupees, or about Rs. 530 per lineal foot. It was constructed between 1888 and 1891. Lying on the route from Kandahār to India, the Khojak Pass has been crossed and recrossed for centuries by conqueror, soldier, and merchant; and its passage was twice effected by the British arms, in 1839 and in 1879.

Khojankhera.—*Thakurāt* in the MĀLWĀ AGENCY, Central India.

Kholāpur.—Town in the District and *tāluk* of Amraoti, Berār, situated in 20° 57′ N. and 77° 33′ E., 18 miles west of Amraotī town. Population (1901), 5,373. Its silk trade was once considerable. In 1809 Vithal Bhāg Deo, *Sūbahdār* of Ellichpur, demanded a contribution of Rs. 1,00,000. On payment being refused he captured the town, which was then protected by walls, and it was sacked by his troops. Its rapid decadence is partly attributable to the annual fights which formerly occurred between the Musalmāns and the Rājputs, when the victorious party always took occasion to plunder at least part of the town.

Khond (*Kandh*).—A Dravidian tribe mostly found in the Tributary States of Orissa, and in the adjoining Agency tract of Ganjām District, Madras. The total number of Khonds or Kandhs (including Konda Dora) returned at the Census of 1901 was 701,198, of whom no less than 517,771 retained their animistic faith, while 494,099 still spoke Kandh or Kuī. The following description chiefly relates to the 10?,000 Khonds in the Orissa State of Kālāhandī, a large tract of which is known as the Kondhān:—

The Khonds call themselves Kūiloka or Kūienjū, which may possibly be derived from *ko* or *kū*, meaning a 'mountain' in Telugu. Their own traditions as to their origin are of no historical value. They were, however, probably in possession of the country before the Oriyā immigration, as is shown by the fact that the Rājā of Kālāhandī was accustomed until recently to sit in the lap of a Khond on his accession, while his turban was tied on and he received the oaths of fealty. The Rājās were also accustomed to take a Khond girl as one of their wives, while many of the *zamīndārs* or large landholders in Kālāhandī, Patnā, and Sonpur are Khonds.

There is no strict endogamy in the Khond tribe. It has two main divisions: the Kutiā Khonds, who are hill-men and retain their primitive tribal customs; and the plain-dwelling Khonds, who have acquired a tincture of Hinduism. The latter have formed several divisions which are supposed to be endogamous, though the rule is not strictly observed. Among these are the Rāj Khonds, Dal, Taonlā, Porkhiā, Kandharrā, Gouriā, Naglā, and others. The Rāj Khonds are the highest, and are usually landed proprietors. Unless they have land they

are not called Rāj Khonds, and if a Rāj Khond marries in another division he descends to it. The Dals, also called Balmudiā or 'shaven,' may have been soldiers. The Porkhiās eat *por*, or buffalo; the Kandharrās grow turmeric; the Gourias graze cattle; and the Naglā, or 'naked,' are apparently so called because of their paucity of clothing. The divisions therefore are mainly due to differences of social practice. The Kutiā or hill Khonds are said to be so called because they break the skulls of animals when they kill them for food. Traditionally the Khonds have thirty-two exogamous septs, but the number has now increased. The septs are further divided into sub-septs, which are also exogamous, and are usually totemistic. The same sub-sept is found in different septs, and a man may not marry a girl belonging to the same sept or sub-sept as himself. But there is no restriction as to marriage on the mother's side, and he can marry his maternal uncle's daughter.

Marriage is adult, and a price is paid for the bride, which was formerly from 12 to 20 head of cattle, but has now been reduced in some localities to two or three, and a rupee in lieu of each of the others. A proposal for marriage is made by placing a brass cup and three arrows at the girl's door. If these are not removed by her father in token of refusal, the terms are discussed. The wedding procession goes from the bride's to the bridegroom's house. At the marriage the bride and bridegroom come out, each sitting on the shoulders of one of their relatives. The bridegroom pulls the bride to his side, when a piece of cloth is thrown over them, and they are tied together with a piece of new yarn wound round them seven times. A cock is sacrificed, and the cheeks of the couple are singed with burnt bread. They pass the night in a veranda, and next day are taken to a tank, the bridegroom being armed with a bow and arrows. He shoots one through each of seven cow-dung cakes, the bride after each shot washing his forehead and giving him a green twig for a toothbrush, and some sweets. This is symbolical of their future course of life, the husband procuring food by hunting, while the wife waits on him and prepares his food. Sexual intercourse before marriage between a man and girl of the tribe is condoned, so long as they are not within the prohibited degrees of relationship. A trace of polyandry survives in the custom by which the younger brothers are allowed access to the elder brother's wife till the time of their own marriage.

On the sixth day after a male child has been born, his mother takes a bow and arrows, and stands with the child facing successively to the four points of the compass. This is to make the child a skilful hunter when he grows up.

The dead are usually buried, but the practice of cremating the bodies of adults is increasing. When a body is buried a rupee or a copper

coin is tied in the sheet, so that the deceased may not go penniless to the other world. Sometimes the dead man's clothes and bows and arrows are buried with him. On the tenth day the soul is brought back. Outside the village, where two roads meet, rice is offered to a cock, and if it eats, this is a sign that the soul has come. The soul is then asked to ride on a bow-stick covered with cloth, and is brought to the house and placed in a corner with those of other relatives. The souls are fed twice a year with rice. In Sambalpur a ball of powdered rice is placed under a tree with a lamp near it, and the first insect that settles on the ball is taken to be the soul, and is brought home and worshipped.

The Khond pantheon consists of eighty-four gods, of whom Dharnī Deotā, the earth-god, is the chief. He is usually accompanied by Bhātbarsī Deotā, the god of hunting. The earth-god is represented by a rectangular piece of wood buried in the ground, while Bhātbarsī has a place at his feet in the shape of a granulated piece of stone. Three great festivals are held annually, marking the dates from which the new *mahuā* flowers and rice may be first eaten. Once in four or five years a buffalo is offered to the earth-god, in lieu of the human sacrifice which was formerly in vogue. The animal is predestined for sacrifice from its birth, and is allowed to wander loose and graze on the crops at its will. The stone representing Bhātbarsī is examined periodically, and when the granules on it appear to have increased it is decided that the time has come for the sacrifice. In Kālāhandī a lamb is sacrificed every year, and strips of its flesh distributed to all the villagers, who bury it in their fields as a divine agent of fertilization, in the same way as the flesh of the human victim was formerly buried. The Khond worships his bows and arrows before he goes out hunting, and believes that every hill and valley has its separate deity, who must be propitiated with the promise of a sacrifice before his territory is entered, or he will hide the animals within it from the hunter, and enable them to escape when wounded. They apparently believe that the souls of the departed are born again in children. Some boys are named Majhian Budhi, which means an 'old headwoman,' whom they suppose to have been born again with a change of sex. Children are weaned in the fifth or sixth year, and are then made to ride a goat or pig, as a mark of respect, it is said, to the ancestor who has been reborn in them. Names usually recur after the third generation.

The Khond traditionally despises all occupations except those of husbandry, hunting, and war. They are considered very skilful cultivators in places, but usually, like other forest tribes, they are improvident and fond of drink.

In 1882 occurred an armed rising of the Khonds of Kālāhandī, as a result of their grievances against members of the Koltā caste, who

had ousted them from some of their villages, and reduced many of their headmen to a hopeless condition of debt. A number of Koltās were murdered and offered to temples, the Khonds calling them their goats, and in one case a Koltā was offered as the *meriah* sacrifice to the earth-god. The rising was promptly suppressed by a Political officer appointed to the charge of the State.

The Khond or Kandh language, called Kuī by the Khonds themselves, is spoken by 32 per cent. of the members of the tribe in Kālāhandī. It is much more nearly related to Telugu than is Gondī, and has no written character. Further information about the Khonds will be found in the articles on the KHONDMĀLS, ANGUL DISTRICT, and MĀLIAHS.

Khondmāls.—Subdivision of Angul District, Bengal, lying between 20° 13′ and 20° 41′ N. and 83° 50′ and 84° 36′ E., with an area of 800 square miles. The population fell from 66,352 in 1891 to 64,214 in 1901, the decrease being due to the prevalence of cholera and other diseases, and to short crops in 1896 and 1899 which stimulated emigration. The density in 1901 was 80 persons per square mile. The subdivision consists of a plateau 1,700 feet in height, intersected by circular ranges of hills. Heavy forest still covers much of the area, and the cultivated lands lie in scattered clearings on the hill-sides and in the valleys below. A range of hills 3,000 to 3,300 feet in height separates the Khondmāls from Ganjām, forming the southern watershed of the Mahānadī. The head-quarters are at Phulbāni, and there are 995 other villages. The Khonds, a Dravidian tribe, here survive as a distinct nationality with a history, a religion, a language, and a system of law and landed property of their own. The villages are divided from each other by rugged peaks and dense forests; but a regular system of government on the aboriginal plan is maintained, the hamlets being distributed into *muthas* each under the supervision of its own chief. Throughout this wild tract the Khonds claim an indefeasible right in the soil. At no time were they more than nominally subject to the Baud Rājā, who was totally unable to control or coerce them. They first came into prominence in the early part of the nineteenth century, owing to the prevalence among them of human sacrifices and female infanticide. The human sacrifice was a propitiatory offering to the earth-god, and the flesh of the victims was buried in the field to ensure good crops; it was firmly believed that turmeric could not have a deep-red colour without the shedding of blood. The victims, or *meriahs* as they were called, were purchased, as an ancient rule ordained that the *meriah* must be bought with a price. The duty of providing them rested with the Pāns, who are attached to every Khond village as serfs, and who either kidnapped them from the plains or purchased them locally. These human sacrifices were suppressed with difficulty by the British Government.

The Khonds hold their lands directly under the Government and pay no rent or tax, except a contribution of 3 annas per plough for the improvement of communications. Infant and adult marriages are both common; in the former case, the girl is often older than the boy. The Khonds of the Khondmāls recognize two principal gods, Sāru Pennu and Tāru Pennu, of whom Sāru Pennu may be described as the god of the hills and Tāru Pennu as the earth-god.

[H. H. Risley, *Tribes and Castes of Bengal* (1891).]

Khonoma.—A large and powerful Angāmī Nāgā village in the Nāgā Hills District, Eastern Bengal and Assam, situated in 25° 39′ N. and 94° 1′ E. In 1879 Mr. Damant, the Political officer, was treacherously attacked here, and was killed, together with thirty-five of his escort. Khonoma was besieged and taken in November, 1879; but two European officers lost their lives in the assault, and the defenders retreated to a very strong position above the village on a spur of Mount Jāpvo, where they maintained themselves till the end of the campaign. In January, 1880, a party of these Nāgās, though their village was at that very time occupied by our troops, made a daring raid on the Bālādhan garden in Cāchār, more than 80 miles distant, where they killed the manager, Mr. Blyth, and sixteen coolies.

Khowai.—River of Assam, which rises in the State of Hill Tippera, and, after flowing north west through the Habiganj subdivision of Sylhet District, falls into the Barāk near Habiganj. The river passes by numerous local centres of trade, the most important of which are Muchikāndi and Habiganj, and is largely used as a trade route. During the rains boats of 4 tons burden can proceed as far as Bāllā Bāzār in Hill Tippera, and even in the dry season a vessel half that size can nearly reach the frontier of the District. The total length of the river is 84 miles.

Khudābād.—Ruined town in the Dādū *tāluka* of Lārkāna District, Sind, Bombay, situated in 26° 40′ N. and 67° 46′ E., 16 miles northeast of Sehwān on the North-Western Railway. Thornton writes of it as follows:—

> 'Little more than thirty years ago it rivalled Hyderābād in size and population; yet now not one habitable dwelling remains. It was a favourite residence of the Tālpur chiefs of Sind, and the remains of many of them rest here in tombs of neat but plain construction.'

At present the chief objects of interest are the Masjid, built in 1710, and decorated with coloured tiles; and the tomb of Yār Muhammad Kalhora, about a mile away, which is similarly decorated. The tomb is in fair repair, but the mosque has been greatly damaged and is falling into ruin.

Khudāganj.—Town in the Tilhar *tahsīl* of Shāhjahānpur District, United Provinces, situated in 28° 8′ N. and 79° 44′ E., 24 miles north-

west of Shāhjahānpur city. Population (1901), 6,356. It is said to have been founded as a market in the middle of the eighteenth century, and under British rule was the head-quarters of a *tahsīl* as late as 1850. Khudāganj is administered under Act XX of 1856, with an income of about Rs. 2,000. It is a thriving place, with a considerable trade in agricultural products. The middle school has 95 pupils.

Khudiān.—Town in the Chuniān *tahsīl* of Lahore District, Punjab, situated in 30° 59′ N. and 74° 17′ E., on the Multān-Ferozepore road, 12 miles south-west of Kasūr. Population (1901) 3,401, chiefly agriculturists. The Katora Inundation Canal of the UPPER SUTLEJ system runs close to the town. The municipality was created in 1875. The income and expenditure during the ten years ending 1902–3 averaged Rs. 2,300. In 1903–4 the income was Rs. 2,700, derived chiefly from octroi; and the expenditure was Rs. 2,400. The town contains a dispensary.

Khuldābād Tāluk (or Rauza).—'Crown' *tāluk* in the north-west of Aurangābād District, Hyderābād State, with an area of 129 square miles. The population in 1901, including *jāgirs*, was 14,512, compared with 16,353 in 1891, the decrease being due to the famines of 1897 and 1899–1900. The *tāluk* contains 38 villages, of which 9 are *jāgīr*, and KHULDĀBĀD (population, 2,845) is the head-quarters. The land revenue in 1901 was Rs. 43,300. The country is hilly towards the east and north.

Khuldābād Village (or Rauza).—Village in the Khuldābād *tāluk* of Aurangābād District, Hyderābād State, situated in 20° 1′ N. and 75° 12′ E., 2,732 feet above sea-level and 500 feet above the plains, 14 miles north-west of Aurangābād city. Population (1901), 2,845. Khuldābād contains the tombs of Aurangzeb and of his son Azam Shāh; of Asaf Jāh, the founder of the Hyderābād State; of Nāsir Jang, Nizām Shāh, king of Ahmadnagar; of Malik Ambar, the Nizām Shāhi minister; of Tāna Shāh, the last of the Kutb Shāhi kings; and of several Musalmān saints. The former name of the place was Rauza, which was changed to Khuldābād in consequence of the title of *Khuld Makān* conferred on Aurangzeb after his death. The extensive ruins of the ancient Hindu city of Buddravanti are situated on an adjoining table-land. In addition to the *tāluk* office, Khuldābād contains a post office, a school, a police *amīn's* office, and a police station. It is largely resorted to as a sanitarium.

Khulnā District.—District of the Presidency Division, Bengal, lying between 21° 38′ and 23° 1′ N. and 88° 54′ and 89° 58′ E. Its area, exclusive of 2,688 square miles in the SUNDARBANS on the south, is 2,077 square miles. It occupies the south central portion of the delta between the Hooghly and Meghnā estuary, and is bounded on

the north by Jessore District; on the east by Backergunge; on the west by the Twenty-four Parganas; and on the south by the Bay of Bengal.

Physical aspects.

The general shape of the District is an irregular parallelogram, and it may be divided into four parts: the north-western portion, where the land is well raised; the north-eastern portion, from the Jessore boundary down to the latitude of Bāgherhāt, where the land is low and covered with swamps; the central portion, also low-lying but now brought under cultivation; and the southern portion, which forms the Khulnā Sundarbans, a tangled network of swamps and rivers, in the greater part of which tillage is impossible and there is no settled population. The whole District forms an alluvial plain intersected by rivers flowing from north to south; their banks, as in all deltaic tracts, rise above the adjacent country, and the land slopes away from them, thus forming a depression between the main lines of the rivers. They have, however, with the exception of the Madhumatī, which forms the eastern boundary of the District, ceased to be true deltaic streams owing to the silting up of their heads. The MADHUMATĪ, with its continuation the Baleswar and its estuary the Haringhāta, still brings down a great quantity of Ganges water to the sea. The other rivers are connected by numerous cross-channels, and are known by a confusing multiplicity of names in different portions of their courses. The most important are the ICHĀMATĪ (2), the JAMUNĀ (2), and the Kabadak, which discharge into the sea by the Raimangal and Mālanchā estuaries respectively; and the Bhairab, now a tributary of the Madhumatī, though a great deal of its water finds its way into the Bay of Bengal through the Rūpsa river. There are no lakes; but the District is studded with marshes, the largest of which, the Bayrā Bīl, extends over 40 miles, but has to a great extent been brought under cultivation.

The District is covered by recent alluvium, consisting of sandy clay and sand along the course of the rivers, and fine silt consolidating into clay in the flatter parts of the river plain, while beds of impure peat commonly occur.

In the north-west of the District there are extensive groves of date-palms (*Phoenix acaulis*), especially on the outskirts of villages. The north-east and centre of the District are generally inundated during the rainy season, only the river banks and the artificial mounds on which habitations are situated rising above the water. These elevated embankments are, where not occupied by gardens, densely covered with a scrubby jungle or semi-spontaneous species, from which rise bamboos, betel-nut and coco-nut palms, with a few taller trees, the commonest being the *Odina Wodier*, and the most conspicuous the red cotton-tree (*Bombax malabaricum*). The surface of the marshes shows

either huge stretches of inundated rice or is covered with matted floating islets of sedges and grasses and various water-lilies, the most striking of these being the *makana* (*Euryale ferox*). The forests of the Sundarbans in the south produce many kinds of timber and an abundant supply of firewood.

The same forests also abound in tigers, leopards, wild buffaloes, hog, swamp deer, spotted deer, hog deer, barking-deer, porcupines, otters, and monkeys. Tigers are very numerous, and their ravages often interfere with the extension of cultivation. Crocodiles are common in the Madhumatī and Bhairab and in all the rivers in the Sundarbans. Snakes of various kinds infest the whole District.

Statistics of temperature are not available. Rainfall commences early, and the annual fall averages 65 inches, of which 6·5 inches fall in May, 12·6 in June, 12·8 in July, 11·8 in August, 8·8 in September, and 4·9 in October. Serious floods occurred in 1885, 1890, and 1900, but they are less now than they were before the Madhumatī had opened out its present channel and the other rivers had silted up at their heads. A cyclone accompanied by a storm-wave occurred in the Bāgherhāt subdivision in 1895.

History.

In ancient times the District formed part of the old kingdom of Banga or Samatata, and subsequently of the Bāgri division of Bengal constituted by Ballal Sen. The earliest traditions are, however, associated with the name of Khānja Alī, who came to the District four and a half centuries ago. He obtained a *jāgīr* from the king of Gaur and made extensive clearances in the Sundarbans, where he appears to have exercised all the rights of sovereignty till his death in 1459. He covered the country with numerous mosques and tombs, the remains of some of which are still to be seen at BĀGHERHĀT and Masjidkur. Vikramāditya, one of the chief ministers of Daud Khān, the last king of Bengal, obtained a grant in the Sundarbans when that monarch rebelled against the king of Delhi, and established at ISWARĪPUR a city from which the District of JESSORE took its name. He was succeeded by his son Pratāpāditya, the popular hero of the Sundarbans, who gained pre-eminence over the twelve chiefs or Bhuiyās then holding possession of Southern Bengal, but was eventually defeated and captured by Mān Singh, Akbar's Hindu general. The present District of Khulnā was formed in 1882 out of the Khulnā and Bāgherhāt subdivisions of JESSORE and the Sātkhira subdivision of the TWENTY-FOUR PARGANAS, and its history after the British accession to the *dīwāni* is comprised in the accounts of those Districts.

Population.

The population has grown rapidly since 1872, the figures being 1,046,878 in 1872, 1,079,948 in 1881, 1,177,652 in 1891, and 1,253,043 in 1901. The increase is due to a large expansion of cultivation in the south, central, and south-west

portions of the District, and a steady but less rapid growth in the marshy country to the north-east, on the confines of Farīdpur. There has been a decrease of population in the north-western corner, and also in a narrow strip of country running from it first in a southerly and then in a south-easterly direction; in this tract fever is very prevalent. In the northern part of the Sātkhira subdivision the drainage is bad, there are numerous swamps, and malaria is always present. The other northern *thānas* are also low-lying, but though there are numerous marshes, the country is more open; and there is less jungle, while the stagnant pools and tanks which are so common in North Sātkhira are rarely to be seen. Dyspepsia, diarrhoea, and dysentery are common when the river water becomes brackish, and cholera sometimes breaks out in an epidemic form. The chief statistics of the Census of 1901 are given below:—

Subdivision.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Khulnā . .	649	1	929	401,785	619	+ 17.7	24,615
Bāgherhāt .	679	...	1,045	363,041	535	+ 6.6	31,279
Sātkhira . .	749	2	1,467	488,217	652	− 1.5	30,491
District total	2,077*	3	3,441	1,253,043	603*	+ 6.4	86,385

* These figures exclude 2,688 square miles in the Sundarbans. If this area be included, the density for the whole District is 263 persons per square mile.

The three towns are KHULNĀ, the head-quarters, DEBHĀTA, and SĀTKHIRA. There is a large immigration from the Districts of Backergunge, Jessore, and Farīdpur, which supply many of the cultivators on new clearances in the Sundarbans; some of these have settled permanently, but many are still domiciled elsewhere. The dialects spoken are Eastern Bengali, or Musalmāni, and East Central Bengali. Hindus (619,123) and Muhammadans (632,216) are almost equally divided.

The great majority of the Muhammadans are Shaikhs (292,000) and Ajlāfs (285,000), while of the remainder the weaving caste of Jolāhās (27,000) is the most largely represented. Probably most of these are descended from local converts from Hinduism, and chiefly from the Chandāls (Namasūdras) and Pods, who still number 191,000 and 105,000 respectively. Of other castes, Kāyasths (39,000), Kaibarttas (36,000), and Brāhmans (31,000) are the most numerous. Agriculture supports 77 per cent. of the population, industries 11·7 per cent., and the professions 1·8 per cent.

Christians in 1901 numbered 1,275, including 1,228 native Christians,

the most important mission at work being the Baptist Missionary Society, which has 18 churches and 24 schools, mostly among the cultivating classes in the Sundarbans. The Oxford Mission has a station at Shelaburiā on the Pusur, about 30 miles south of Khulnā; and some Roman Catholics at Mālgāchi, also in the Sundarbans, are visited occasionally by their priests.

Agriculture.

The clay land of the river plain (*mathiāl*) is most suitable for rice, while cold-season crops, such as pulses, oilseeds, and the betel-vine (*Piper Betle*), grow best on the sandy clay known as *doāshia*. In the decomposed vegetable deposits of the marshes winter rice of the coarsest sort is the only crop grown. Except in the higher land and in the north of the Sātkhira subdivision, partial failure of crops is not uncommon owing to the deposits of salt left by the tide. The south-west of the District suffers especially from this cause; elsewhere the salt is as a rule annually washed away during the rainy season, and the soil is renovated by the deposits left by the overflow of the rivers. The cultivators in some places put up small embankments, known locally as *bheris*, to keep out the salt water. It is estimated that 1,343 square miles were cultivated in 1903–4, and that the cultivable waste amounted to 334 square miles; separate statistics for the subdivisions are not available.

Rice is the staple food-grain, covering 1,213 square miles. The principal crop is the winter variety, for which the reclaimed portions of the Sundarbans are famous; the soil is here new and unexhausted, and the out-turn is abundant. In the Sundarbans this crop is sown broadcast in the early part of July and reaped in January. Elsewhere it is sown in nurseries during April and May, transplanted about July, and reaped in November and December; in low lands, however, it is occasionally sown broadcast. Oilseeds, principally mustard, are grown on 100 square miles, while jute covers 14 and tobacco 8 square miles. Date-palms (*Phoenix acaulis*) and betel-nut palms (*Areca Catechu*) are also largely grown. Fisheries are plentiful, and fishing constitutes an important industry.

Cultivation is being steadily extended into the shallow *bīls* which form so marked a feature of this part of Bengal. In the south progress is being made in pushing back the jungle of the Sundarbans, where the new clearances attract cultivators not only from other parts of the District, but also from Nadiā, Jessore, Farīdpur, and elsewhere. There was some scarcity in 1896–8, when Rs. 69,000 was advanced under the Agriculturists' Loans Act; the annual average of the sums advanced under that Act during the ten years ending 1901–2 was Rs. 7,000, while the sums advanced under the Land Improvement Loans Act averaged Rs. 5,000 per annum.

There is little real pasture land in the District, and fodder is scarce.

No attempts have been made to improve the breed of cattle, which is very poor.

Forests.

The Forest department administers 2,081 square miles of 'reserved' forests in the Sundarbans, but this area includes 533 square miles of water channels; large quantities of forest produce are exported to the adjoining Districts. The principal trees are *sundri* (*Heritiera littoralis*), *pasur* (*Carapa moluccensis*), *amur* (*Amoora cucullata*), *keorā* (*Sonneratia apetala*), *garān* (*Ceriops Candolleana*), and *geoā* (*Excoecaria Agallocha*). The minor produce consists of *golpāta* (*Nipa frutescens*), *hantāl* (*Phoenix paludosa*), *nal* or thatching-grass, honey, wax, and shells. The gross revenue from the forests in 1903–4 was 3·33 lakhs.

Trade and communications.

The chief industry is the manufacture of sugar and molasses from the juice of the date-palm, but for some years it was seriously affected by the competition of imported sugar. The out-turn of sugar in 1903–4 was 19,000 maunds valued at 1·96 lakhs, and of molasses 68,000 maunds valued at 1·83 lakhs. The earthen pottery, cutlery, and horn industries of Kālīganj are of considerable importance. Coarse cotton cloths are manufactured on hand-looms, and are said to be preferred by the poorer classes to machine-made goods on account of their durability; but the industry is not flourishing.

The chief exports are rice and paddy to Calcutta, the Twenty-four Parganas, Nadiā, and Jessore; and gram, pulses, oilseeds, jute, tobacco (unmanufactured), sugar (unrefined), firewood, timber, minor forest produce, *pān* leaf, betel-nuts, coco-nuts, and fish to Calcutta. The chief imports are raw cotton, cotton twist, European cotton piece-goods, hardware, glassware, sugar (refined), shoes, English liquors, kerosene oil, coal and coke, lime, and tobacco. The chief trade centres are Khulnā, Daulatpur, Phultalā, Alīpur, Kapilmuni, Chaknagar, Chalnā, Jalmā, Dumriā, and Kutīrhāt, all in the head-quarters subdivision; Bāgherhāt, Fakīrhāt, Mausha, Jātrāpur, Kachuā, Chitalmāri, Gaurambha, and Morrelganj in the Bāgherhāt subdivision; and Baradal, Pātkelghāta, Kālīganj, Kalāroā, Debhata, Chānduriā, Basantpur, Asāsuni, Talā, and Naobānki in the Sātkhira subdivision. The principal castes engaged in trade are Kāyasths, Telis, Bāruis, Sāhās, Mālos, Baniks, Namasūdras, and Muhammadans.

The Eastern Bengal State Railway connects Khulnā with Jessore and Calcutta. In 1903–4 the District contained 490 miles of roads, of which only 12 miles were metalled, in addition to 1,031 miles of village tracks. The principal roads are those connecting Khulnā with Jessore and Bāgherhāt.

The larger rivers are for the most part tidal and navigable by large boats throughout the year, and they carry a great amount of traffic

Some of the connecting channels form portion of a very important system of waterways connecting Calcutta with the eastern Districts, and also with the Ganges and the Brahmaputra systems (*see* CALCUTTA AND EASTERN CANALS). The central mart of the Sundarbans is the town of Khulnā, towards which all the boat routes converge. The chief route, after reaching the junction of the Kabadak with the Morirchap river, proceeds by the latter as far as its junction with the Betua and the Kholpetuā, where it divides into two channels. The large boats pass along the Kholpetuā, Galghasiā, Bānstala, and Kānksiāli channels to Kālīganj, while the smaller boats enter the Sovnali at its junction with the Kholpetuā and proceed to Kālīganj by the Guntiākhāli, Hābra Sītalkhāli, Jhapjhapia, and Kānksiāli; the route through the Sītalkhāli has been shortened since the opening of the Gobinda Canal, and boats of all sizes now pass through it. From Kālīganj the route proceeds through the Jamunā as far as Basantpur, where it again divides, forming an inner and an outer passage. The outer passage enters the Twenty-four Parganas through the Kālindri river and the Sāhibkhāli and Barakulia Khāls, while the inner passage proceeds by the Jamunā from Basantpur to Husaināhād, where it enters a channel called the Husaināhād or Dhānsara Khāl. From Khulnā routes branch off north, east, and south; the chief northern route proceeds up the Athārabānki, Madhumatī, and Garai into the Padmā or main channel of the Ganges, and carries the river trade not only of Northern Bengal but also of Bihār during the season when the Nadiā rivers are closed. In recent years, the silting up of this route has led to its abandonment by steamers. The eastern route from Khulnā passes down the Bhairab, and then by Barisāl through Backergunge District to Dacca. The main southern route connects Khulnā with Morrelganj.

In addition to the Cāchār-Sundarbans dispatch service, which plies from Calcutta through the Sundarbans to Barisāl, Chāndpur, Nārāyanganj and Assam, there are services of steamers between Khulnā and Muhammadpur, Khulnā and Binodpur, and (during the rains) Māguia and Khulnā and Mādārīpur via the Madhumatī Bīl route (*see* FARĪDPUR DISTRICT). There is also a service on the Kabadak between Kapilmuni in Khulnā and Kotchāndpur in the Jessore District, which taps the railway at Jhingergācha.

The famine of 1897–8 affected parts of the Khulnā and Sātkhira subdivisions. The rainfall was deficient in 1895–6, and a cyclonic storm drove salt water over the fields and destroyed the young plants. The rainfall was again very short in 1896–7, and the out-turn of the great rice area bordering on the Sundarbans barely amounted to an eighth of the normal crop. An area of 467 square miles with a population of 276,000 was affected, but

Famine.

the number requiring relief never exceeded 16,000. The relief works were closed at the end of September, but poorhouses were maintained till a month later. The total expenditure was 1·74 lakhs, of which Rs. 61,000 was spent on relief works and Rs. 75,000 on gratuitous relief. Apart from this, Rs. 48,000 was advanced under the Land Improvement Loans Act and Rs. 69,000 under the Agriculturists' Loans Act.

For administrative purposes the District is divided into three subdivisions, with head-quarters at KHULNĀ, BĀGHERHĀT, and SĀTKHIRA.

Administration.

The Magistrate-Collector is assisted at head-quarters by a staff of four Deputy-Magistrate Collectors, and the Bāgherhāt and Sātkhira subdivisions are each in charge of a Deputy-Magistrate-Collector assisted by a Sub-Deputy-Collector. A Deputy-Conservator of forests and two Extra-Assistant Conservators attached to the Sundarbans division are also stationed at Khulnā.

For the disposal of civil judicial work, in addition to the District and Sessions Judge, who is also Judge of Jessore, two Munsifs and a Subordinate Judge sit at Khulnā and three Munsifs at each of the other subdivisional head-quarters. There are in all twelve criminal courts, including the court of an Additional Sessions Judge, who also sits at Jessore for a portion of the year. The most common cases are those arising out of land disputes.

The early land revenue history of the District cannot be distinguished from that of the neighbouring Districts of Jessore and the Twenty-four Parganas, of which until recently it formed part. At the time of the Permanent Settlement, most of the present District was divided into a few large *zamīndāris*, including portions of the Isafpur and Saidpur estates (*see* JESSORE DISTRICT). Of 979 estates in 1903–4 with a current demand of 6·9 lakhs, 756 with a demand of 5·1 lakhs were permanently settled. There are no tenures peculiar to the District *Utbandi* tenants pay rent only upon the land actually cultivated during the year (*see* NADIA DISTRICT). *Korfā* ryots hold under a middleman such as a *gānthīdār* or *jotdār*, *miādi* ryots are liable to ejectment after a fixed period, *kistkāri* ryots are tenants-at-will, while the occupants of *jula jamā* and *dhānya karāri* holdings pay rent in kind For the whole District the incidence of rental is Rs. 4–3–2 per cultivated acre; but rents vary greatly, ranging from Rs. 4–8 to Rs. 9 per acre in the Khulnā subdivision, from Rs. 3 to Rs. 18 in Bāgherhāt, and from Rs. 3 to Rs. 7 in Sātkhira. *Pān* and garden lands bring in between Rs. 6 and Rs. 9 in Bāgherhāt, and between Rs. 9 and Rs. 18 in Khulnā, while in Sātkhira as much as Rs. 30 is occasionally paid for garden and Rs. 52 for *pān* land. In a settlement of a small tract which was made in 1901–2 the rate of rent was found to vary from Rs. 2–13 to Rs. 6 per cultivated acre, the average rate being Rs. 4–6–6, and the average holding of each tenant 12·28 acres.

The following table shows the collections of land revenue and of total revenue (principal heads only), in thousands of rupees:—

	1890-1.	1900-1.	1903-4.
Land revenue . .	6,44	6,69	6,86
Total revenue . .	11,48	13,21	14,23

Outside the municipalities of KHULNĀ, SĀTKHIRA, and DEBHĀTA, local affairs are managed by the District board, with subordinate local boards in each subdivision. In 1903-4 the income of the District board was Rs. 1,95,000, of which Rs. 1,03,000 was derived from rates; and the expenditure was Rs. 1,56,000, including Rs. 98,000 spent on public works and Rs. 35,000 on education.

The District contains 13 police stations and 9 outposts; and in 1903 the force subordinate to the District Superintendent consisted of 3 inspectors, 35 sub-inspectors, 36 head constables, and 394 constables, including 41 water constables and 57 town police. In addition, there was a rural police of 239 *daffadārs* and 2,155 *chaukīdārs*. The District jail at Khulnā has accommodation for 49 prisoners, and subsidiary jails at Sātkhira and Bāgherhāt have accommodation for 47.

In respect of education Khulnā is less advanced than would be expected from its proximity to Calcutta, and in 1901 only 6·9 per cent. of the population (12·4 males and 0·8 females) could read and write. The total number of pupils under instruction fell from 38,000 in 1892-3 to 34,000 in 1900-1. In 1903-4 there were 34,000 boys and 3,000 girls at school, being, respectively, 34·7 and 3·4 per cent. of the children of school-going age. The number of educational institutions, public and private, in that year was 1,009, including an Arts college, 91 secondary, 909 primary, and 8 special schools. The expenditure on education was 1·8 lakhs, of which Rs. 21,000 was met from Provincial funds, Rs. 34,000 from District funds, Rs. 1,000 from municipal funds, and Rs. 96,000 from fees.

In 1903 the District contained 11 dispensaries, of which 3 had accommodation for 41 in-patients. At these the cases of 79,000 out-patients and 500 in-patients were treated during the year, and 2,000 operations were performed. The expenditure was Rs. 15,000, of which Rs. 1,100 was met by Government contributions, Rs. 7,000 from Local and Rs. 2,000 from municipal funds, and Rs. 4,000 from subscriptions.

Vaccination is compulsory only in municipal areas. In 1903-4 the number of persons successfully vaccinated was 32,000, or 26·28 per 1,000 of the population

[Sir W. W. Hunter, *Statistical Account of Bengal*, vols. i and ii (1875); Sir J. Westland, *Report on Jessore* (Calcutta, 1874), F. E. Pargiter, *Revenue History of the Sundarbans from* 1765 *to* 1870 (Calcutta, 1885).]

Khulnā Subdivision.—Head-quarters subdivision of Khulnā District, Bengal, lying between 21° 41′ and 23° 1′ N. and 89° 14′ and 89° 45′ E., with an area of 649 square miles. The subdivision is an alluvial tract, merging to the south in the Sundarbans; the general features are the same as in the lower delta through which the rivers of Bengal find their way to the sea. Its population in 1901 was 401,785, compared with 341,493 in 1891, the density being 619 persons per square mile. It contains one town, KHULNĀ, its head-quarters (population, 10,426); and 929 villages. Khulnā town is the chief centre of trade; but ALAIPUR, DAULATPUR, DUMRIĀ, PHULTALĀ, and KAPILMUNI are also important marts.

Khulnā Town.—Head-quarters of Khulnā District, Bengal, situated in 22° 49′ N. and 89° 34′ E., at the point where the Bhairab river meets the Sundarbans. Population (1901), 10,426. Khulnā may be described as the capital of the Sundarbans, and has been for more than a hundred years a place of commercial importance. It was the head-quarters of the salt department during the period of the Company's salt manufacture. It is the terminus of the central section of the Eastern Bengal State Railway, and all the great river routes converge on the town, it being connected by steamer with NĀRĀYANGANJ, BARISĀL, MĀDĀRĪPUR, Muhammadpur, and Binodpur. Rice, sugar, betel-nuts, and coco-nuts, the produce of the vicinity, are collected here for export to Calcutta, and the trade in salt is also large. Khulnā was constituted a municipality in 1884. The income during the decade ending 1901–2 averaged Rs. 22,000, and the expenditure Rs. 20,000. In 1903–4 the income was Rs. 19,000, including Rs. 4,600 derived from a tax on persons (or property tax), Rs. 3,500 from a tax on houses and lands, and Rs. 4,600 from a conservancy rate; and the expenditure was Rs. 17,000. The municipality has recently undertaken a scheme for improving the drainage. The town contains the usual civil, criminal, and revenue courts, District jail, circuit-house, hospital, and schools. The jail has accommodation for 49 prisoners; the principal industries are oil-pressing, wheat-grinding, paddy-husking, mat-making, aloe pounding, and rope-making. The Woodburn Hospital was completed in 1901 at a cost of Rs. 18,000.

Khunti Subdivision.—South-eastern subdivision of Rānchi District, Bengal, lying between 22° 38′ and 23° 18′ N. and 84° 56′ and 85° 54′ E., with an area of 1,140 square miles. The subdivision, which was created in 1905, is an elevated table-land; but to the south the surface is broken and the undulating ridges and valleys give place to steep hills and ravines, terminating in a comparatively open plain to the south-east towards Mānbhūm. It had a population in 1901 of 225,407, compared with 198,730 in 1891, the density being 198 persons per square mile. It contains one town, BŪNDU (popula-

tion, 5,469), and 599 villages, one of which, KHUNTI, is the head-quarters.

Khunti Village.—Head-quarters of the subdivision of the same name in Rānchī District, Bengal, situated in 23° 5′ N. and 85° 16′ E. Population (1901), 1,446. It is a trade centre of some importance on the road from Rānchī to Chaibāsa.

Khurai Tahsīl (*Kurai*).—North-western *tahsīl* of Saugor District, Central Provinces, lying between 23° 51′ and 24° 27′ N. and 78° 4′ and 78° 43′ E., with an area of 940 square miles. The population decreased from 126,004 in 1891 to 93,788 in 1901. The density in the latter year was 100 persons per square mile, which is below the District average. The *tahsīl* contains two towns, KHURAI (population, 6,012), the head-quarters, and ETĀWA (6,418); and 470 inhabited villages. Excluding 124 square miles of Government forest, 45 per cent. of the available area is occupied for cultivation. The cultivated area in 1903–4 was 238 square miles. The demand for land revenue in the same year was Rs. 77,000, and for cesses Rs. 8,000. The *tahsīl* is an open undulating plain, with a stretch of hilly and stony land in the north, and belts of forest on the borders of the Bīna and Betwā rivers.

Khurai Town.—Head-quarters of the *tahsīl* of the same name in Saugor District, Central Provinces, situated in 24° 3′ N. and 78° 20′ E., on the railway line towards Bīna, 33 miles from Saugor town. Population (1901), 6,012. An old fort is now used as the *tahsīl* office. Khurai contains a considerable colony of Jains and a number of fine Jain temples. It was created a municipality in 1867. The municipal receipts during the decade ending 1901 averaged Rs. 15,300. In 1903–4 the receipts were Rs. 8,000, mainly derived from fees on the registration of cattle. The town is a collecting centre for local trade. A large weekly cattle market is held here, and dried meat is prepared for export to Burma. Khurai contains an English middle school, two branch and two girls' schools, one of which is supported by the Swedish Lutheran Mission, and a dispensary.

Khurdā Subdivision.—Western subdivision of Purī District, Bengal, lying between 19° 41′ and 20° 26′ N. and 84° 56′ and 85° 53′ E., with an area of 971 square miles. The population in 1901 was 359,236, compared with 331,423 in 1891, the density being 370 persons per square mile. The subdivision adjoins the south-eastern fringe of the Chotā Nāgpur plateau, and detached hills of gneiss occur, the plains between them consisting of laterite and alluvium. It contains 1,212 villages, one of which, KHURDĀ, is its head-quarters; but no town. At BHUBANESWAR are situated the celebrated Lingarāj temple and numerous other temples, and the KHANDGIRI and Udayagiri hills contain many caves and rock temples.

Khurdā was the last portion of territory held by the independent Hindu dynasty of Orissa. The Marāthā cavalry were unable to overrun this jungle-covered and hilly tract; and the ancient royal house retained much of its independence till 1804, when the Rājā rebelled against the British Government and his territory was confiscated. A rising on the part of the peasantry took place in 1817–8, due chiefly to the oppression of the minor Bengali officials. The insurrection was speedily quelled, reforms were introduced and grievances redressed: and at the present day Khurdā is a profitable and well-managed Government estate, the cultivators being a contented and generally prosperous class. The current settlement dates from 1897, when the demand was assessed at 3·77 lakhs. The present Rājā of Khurdā is hereditary superintendent of the temple of Jagannāth, but has delegated all his powers as such for five years to an experienced Deputy-Magistrate-Collector.

[J. Taylor, *Settlement Report* (Calcutta, 1900).]

Khurdā Village.—Head-quarters of the subdivision of the same name in Purī District, Bengal, situated in 20° 11′ N. and 85° 38′ E., on the high road from Cuttack to Ganjām in Madras, and connected by road with the Bengal-Nāgpur Railway. Population (1901), 3,424. Between 1818 and 1828 Khurdā was the head-quarters of Purī District, transferred in the latter year to Purī town. It contains the usual public offices; the sub-jail has accommodation for 10 prisoners.

Khuriā.—Plateau in the Jashpur State, Central Provinces, occupying the north-western portion of the State, and lying between 23° 0′ and 23° 14′ N. and 83° 30′ and 83° 44′ E. It consists of trap-rock topped with volcanic laterite, overlying the granite and gneiss which form the surface rocks at lower elevations. The plateau affords excellent pasturage, and Ahirs or cowherds from Mirzāpur and elsewhere drive in large herds of cattle to graze; many such Ahīrs have settled here permanently.

Khurja Tahsīl.—Southern *tahsīl* of Bulandshahr District, United Provinces, comprising the *parganas* of Jewar, Khurja, and Pahāsū, and lying between 28° 4′ and 28° 20′ N. and 77° 29′ and 78° 12′ E., with an area of 462 square miles. The population rose from 221,137 in 1891 to 266,838 in 1901 There are 348 villages and seven towns, the largest of which are KHURJA (population, 29,277), the *tahsīl* head-quarters, JEWAR (7,718), PAHĀSŪ (5,603), CHHATĀRĪ (5,574), and RABŪPURA (5,048). The demand for land revenue in 1903–4 was Rs. 5,05,000, and for cesses Rs. 82,000. The *tahsīl* is drained by the East Kālī Nadī, the Karon or Karwan, and the Patwai or Patwāhā Bahū, all which have been deepened and straightened to improve the drainage. The Jumna flows along the western border. East of the Kālī Nadī and west of the Patwai are tracts of light sandy soil;

but the central portion is highly fertile, and is well supplied by irrigation from the Upper Ganges Canal and the Māt branch of the same work. Cotton is more largely grown in this tract than in any other part of the District. In 1903–4 the area under cultivation was 345 square miles, of which 152 were irrigated. Well-irrigation supplies about one-third of the total, and is chiefly important in the area between the canals.

Khurja Town.—Head-quarters of the *tahsīl* of the same name in Bulandshahr District, United Provinces, situated in 28° 15′ N. and 77° 51′ E., near the grand trunk road, and 4 miles from Khurja station on the East Indian Railway. Population (1901), 29,277, of whom 15,878 are Hindus and 12,923 Musalmāns. The town is said to derive its name from *khānja* ('revenue free'). as it was built by the Bhāle Sultān Rājputs on a revenue-free grant made by Fīroz Shāh Tughlak. The descendants of the original grantees retained possession of their holdings till they were resumed partly by Sūraj Mal, Rājā of Bharatpur, in 1740, and partly by Daulat Rao Sindhia towards the close of the eighteenth century. There is only one ancient building, the tomb of Makhdūm Sāhib, near the grand trunk road, which is about 400 years old. The chief public buildings are the *tahsīlī*, dispensary, and town hall. The principal inhabitants are Kheshgi Pathāns and Churūwāl Baniās; the latter, who are Jain by religion, are an enterprising and wealthy class, carrying on banking all over India and taking a leading share in the trade of the place. Thirty years ago they built a magnificent domed temple, which cost more than a lakh and is adorned with a profusion of stone carving of fine execution. The interior is a blaze of gold and colour, the vault of the dome being painted and decorated in the most florid style of indigenous art. The market-place, bazar, and *dharmsāla*, all adorned with handsome gateways of carved stone, also owe much to the munificence of the Jain traders. There are branches of the American Methodist and the Zanāna Bible and Medical Missions.

Khurja has been a municipality since 1866. The receipts and expenditure during the ten years ending 1901 averaged Rs. 27,500. In 1903–4 the income was Rs. 38,000, chiefly derived from octroi (Rs. 28,000); and the expenditure was Rs. 42,000. The town is the chief commercial centre of the District, and contains seven cotton-gins and presses, which employed 444 hands in 1903. Cotton-ginning by hand is important, and there is a very large export of grain, besides a smaller trade in indigo, sugar, and *ghī*. The pottery of Khurja resembles that made at MULTĀN and in the RĀMPUR STATE, and has some reputation. English cotton cloth, metals, and brass utensils are the chief articles imported. There are eight schools with about 600 pupils.

Khushāb Tahsīl.—*Tahsīl* of Shāhpur District, Punjab, lying between

31° 32′ and 32° 42′ N. and 71° 37′ and 72° 38′ E., with an area of 2,536 square miles. It is bounded on the east by the Jhelum river. The population in 1901 was 161,885, compared with 151,627 in 1891. The head-quarters are at the town of KHUSHĀB (population, 11,403). The number of villages is 206. The land revenue and cesses in 1903–4 amounted to 2·4 lakhs. The SALT RANGE runs through the north of the *tahsīl*, culminating in the peak of SAKESAR. The fertile southern slopes sink into a salt-impregnated plain, which in turn gives place to the sand-hills of the Thal. Along the Jhelum lies a narrow strip of fertile lowland.

Khushāb Town.—Head-quarters of the *tahsīl* of the same name in Shāhpur District, Punjab, situated in 32° 18′ N. and 72° 22′ E., on the right bank of the Jhelum river, and on the Sind-Sāgar branch of the North-Western Railway. Population (1901), 11,403. It has an extensive trade, exporting cotton, wool, and *ghī* to Multān and Sukkur, cotton cloth to Afghānistān and the Derajāt; and wheat grown in the Salt Range, which is considered particularly suitable for export, principally to Karāchi. The municipality was created in 1867. The income during the ten years ending 1902–3 averaged Rs. 12,100, and the expenditure Rs. 11,000. In 1903–4 the income was Rs. 11,500, chiefly from octroi; and the expenditure was Rs. 11,000. The town possesses an Anglo-vernacular middle school, maintained by the municipality, and a Government dispensary.

Khutāhan.—Northern *tahsīl* of Jaunpur District, United Provinces, comprising the *parganas* of Unglī, Rārī (*tāluka* Badlāpur), Karyāt Mendhā, and Chānda, and lying between 25° 50′ and 26° 12′ N. and 82° 21′ and 82° 46′ E., with an area of 362 square miles. Portions of the *tahsīl* form enclaves in Partābgarh and Sultānpur Districts. Population fell from 286,832 in 1891 to 269,438 in 1901. There are 700 villages and only one town, SHĀHGANJ (population, 6,430), the *tahsīl* head-quarters. The demand for land revenue in 1903–4 was Rs. 2,27,000, and for cesses Rs. 50,000. The density of population, 744 persons per square mile, is below the District average. Several small drainage channels exist; but the Gumti, which crosses the south-west of the *tahsīl*, is the only considerable river. Khutāhan contains a large area of good rice land, and also a number of barren *ūsar* tracts. The area under cultivation in 1903–4 was 288 square miles, of which 129 were irrigated. Wells supply about seven-eighths of the irrigated area, and tanks and *jhīls* most of the remainder.

Khuzdār.—The principal place in the Jhalawān division of the Kalāt State, Baluchistān, and the head-quarters of the Native Assistant and of the Khān of Kalāt's *naib*, situated in 27° 48′ N. and 66° 37′ E. It is known to the Sindīs as Kohiār, and is a long narrow valley, at the upper end of which a fort was constructed in 1870. Khuzdār owes its importance to its central position at the point of convergence of roads

from Kalāt on the north, Karāchi and Bela on the south, Kachhi on the east, and Makrān and Khārān on the west. It is unhealthy in summer. The garrison consists of 7 artillerymen with one gun and 45 irregular levies. The Native Assistant has a small escort of 20 levies. The *niābat* of Khuzdār includes land in Bāghwāna, Zidi, the valley of the Kolāchi river, Karkh, and Chakku.

Khyber (*Khaibar*).—Historic pass leading from Peshāwar District in the North-West Frontier Province into Afghānistān, the centre of the pass lying in 34° 6′ N. and 71° 5′ E. The name is also applied to the range of hills through which the pass runs. The Khyber mountains form, indeed, the last spurs of the Safed Koh, as that mighty range sinks down into the valley of the Kābul river. The elevation of the connecting ridge is 3,400 feet, but it rises to 6,800 feet in the Tārtara peak. On either side of it are the sources of two small streams, one flowing north-west to the Kābul river, the other south-south-east towards Jamrūd. The beds of these streams form the Khyber defile.

The Khyber Pass is the great northern route from Afghānistān into India, while the Kurram and Gomal Passes form intermediate communications, and the Bolān Pass is the great southern passage. The pass begins near Jamrūd, 10½ miles west of Peshāwar, and twists through the hills for about 33 miles in a north-westerly direction till it debouches at Dakka. The most important points *en route* are Alī Masjid, a village and fort 10¼ miles from Jamrūd; Landi Kotal, the summit of the pass, 10 miles farther; and Tor Kham, at which point the pass enters Afghān territory, about 6 miles beyond Landi Kotal. The plains of Peshāwar District stretch from the eastern mouth of the pass, and those of Jalālābād from the western. Outside the eastern gate is the remarkable collection of caves at Kadam, and beyond its western limits are many interesting remains of Buddhism and of ancient civilization. The pass lies along the bed of a torrent, chiefly through slate rocks, and is subject to sudden floods, especially in July, August, December, and January. The gradient is generally easy, except at Landi Khāna, and the road is in good condition.

The elevation, in feet, at various points of the pass is: Jamrūd, 1,670; Alī Masjid, 2,433; Landi Kotal, 3,373; Landi Khāna, 2,488; Dakka, 1,404. The ascent over the Landi Khāna pass is narrow, rugged, steep, and generally the most difficult part of the road. Guns could not be drawn here except by men, and then only after the improvement of the road; the descent is a well-made road, and not so difficult. Just beyond Alī Masjid the road passes over a stretch of uneven and slippery rock, which is extremely difficult for laden animals. The Khyber can be turned by the Mullagori road, which enters the hills about 9 miles north of Jamrūd, and either joins the Khyber road or keeps to the north of the range and emerges at Dakka.

The Khyber has always been one of the gateways into India. Alexander of Macedon probably sent a division under Hephaistion and Perdiccas through the Khyber, while he himself followed the northern bank of the Kābul river, and thence crossed the Kunar valley into Bājaur and Swāt. Mahmūd of Ghazni only once used the Khyber route, when he marched to encounter Jaipāl in the Peshāwar valley. The Mughal emperors Bābar and Humāyūn each traversed it more than once. Nādir Shāh, advancing by it to attack Nāsir Khān, *Sūbahdār* of Kābul under the Mughal government, was opposed by the Pathāns; but he led his cavalry through Bāzār, took Nāsir Khān completely by surprise, and overthrew him near Jamrūd. Ahmad Shāh Durrāni and his grandson Shāh Zamān, in their invasions of the Punjab, also followed the Khyber route on several occasions. The Mughal emperors attached great importance to the control of the Khyber, but were singularly unsuccessful in their attempts to keep the route open. Then, as now, it was held by the Afrīdi Pathāns, a race implacably hostile to the Mughals.

Jalālābād, first fortified by Humāyūn in 1552, was further strengthened by his son Jalāl-ud-dīn Akbar, after whom it was named; and the latter emperor so improved the road that wheeled carriages could traverse it with ease. But even in his reign the Khyber was infested by the Roshānia sectaries, who wielded great influence over the Afghān tribes; and the Rājput general Mān Singh had to force the pass in 1586, when Akbar desired to secure possession of Kābul on the death of his brother Mirza Muhammad Hakīm. In 1672, under Aurangzeb, the tribes waylaid the *Subahdār* of Kābul, Muhammad Amīn Khān, in the pass, and annihilated his army of 40,000 men, capturing all his treasure, elephants, women, and children.

The first British advance into the Khyber was in 1839, when Captain Wade was deputed to conduct Shāhzāda Tīmūr to Kābul via Peshāwar, while his father Shāh Shujā was escorted thither by the army of the Indus via the Bolān Pass and Kandahār.

During the first Afghān War the Khyber was the scene of many skirmishes with the Afrīdis and of some disasters to our troops. Captain Wade, with from 10,000 to 11,000 of all arms, including the Sikh contingent, moved from Jamrūd on July 22, 1839, to Gāgri; here he halted a day and entrenched his position; on July 24 he again marched to Lāla Chīna, on the 25th he moved to the attack of Alī Masjid, sending a column of 600 men and 2 guns, under Lieutenant Mackeson, to the right, and 11 companies of infantry, one 6-pounder gun, and one howitzer to the left, while below a column was placed to watch the mouth of Shādi Bagadi gorge. Both columns drove the enemy before them, the right meeting with some opposition, and the left getting into a position to shell the fort. On the 26th all

the enemy's outposts were driven in, and on the 27th they evacuated the fort. The enemy had 509 *jazailchis*, or musket-men, and were supported by several hundred Afrīdis. The British loss was 22 killed and 158 wounded. After this there was no further opposition.

A strong post was left in Alī Masjid and a detachment near Lāla Chīna to maintain communication with Peshāwar, and a post of irregulars under Lieutenant Mackeson was placed near Dakka. The post near Lāla Chīna was attacked during the operations. It was garrisoned by Yūsufzai auxiliaries, whose numbers had been thinned and the survivors worn down by continued sickness, when the Afrīdis, estimated at 6,000 strong, attacked their breastwork. They were long kept at bay, but the marauders were animated by the lust of plunder, and persevered in their attacks. They were aware that the devoted garrison had recently received their arrears of pay, and that a sum of Rs. 12,000 was buried on the spot. Finally, they carried the weak fieldwork, and put to the sword 400 of its defenders. They did not keep possession of it, but, after repeating their vain attempts on Alī Masjid and the posts in the valley, retired to their mountains.

When Jalālābād was blockaded, it was proposed to send a force through the Khyber to its relief, and as a preliminary measure Lieutenant-Colonel Moseley was detached to occupy Alī Masjid with two regiments of native infantry. He marched on the night of January 15, 1842, and reached the place with little opposition the next morning. Through some mismanagement, however, only a portion of the provisions requisite for the two regiments accompanied them. It became necessary, therefore, to forward the residue without delay; and Brigadier Wilde advanced from Jamrūd with the remaining two regiments (the 60th and 30th Native Infantry) and 4 Sikh guns. But the appearance of Colonel Moseley's detachment had alarmed the Afrīdis, who now rose and, closing the pass, prepared to resist Brigadier Wilde's entrance. The brigadier nevertheless pushed onwards on January 19, and encountered the enemy at the mouth of the pass; but, owing to the uselessness of the Sikh guns and the inadequacy of his force with so powerful a body of the enemy advantageously placed in his front, his attempt to reach Alī Masjid totally failed. The situation of Lieutenant-Colonel Moseley shut up in Alī Masjid, with scarcely any provisions, now became desperate; but he was successful in forcing his way back to Jamrūd.

The next occasion on which the Khyber was used as a great military road was when General Pollock advanced on April 6, 1842. On his return to India the British army marched through the Khyber in three divisions. The first, under General Pollock, passed through with no loss. The second, under General M'Caskill, was not equally fortunate. One brigade being overtaken by night left two mountain-train guns

with the rear-guard, which was suddenly attacked, and the guns were taken, but recovered next day. The rear-guard of General Nott's force was also attacked on November 5 and 6 between Landi Khāna and Lālabāgh, and again on leaving Alī Masjid.

It was at Alī Masjid in 1878 that Sir Neville Chamberlain's friendly mission to the Amīr Sher Alī Khān was stopped and repelled with threats. An ultimatum was therefore handed to the Amīr's general, Faiz Muhammad, in Alī Masjid; and the day specified having passed without the return of an answer, Afghānistān was invaded by three British columns, one of which started from Jamrūd at the mouth of the Khyber.

On the second day of the campaign the fortress of Alī Masjid was brilliantly captured by the British troops under General Browne. The successful passage of the Khyber, and the unopposed occupation, first of Dakka at the western mouth of the pass, and then of Jalālābād in the plains beyond, immediately followed. The treaty which closed the war in May, 1879, left the Khyber tribes for the future under British control. From that date the history of the Khyber Pass is bound up with that of the Khyber Political Agency, which includes Mullagori country north of the Khyber, Tīrāh of the Afrīdis, and the country on both sides of the Khyber Pass. None of it is administered, but the pass is kept open and is picketed twice a week for the passage of caravans.

The Khyber Political Agency is bounded on the north by the Kābul river and the Safed Koh; on the east by Peshāwar District; on the south by the Aka Khel and Orakzai countries; and on the west by the Chamkanni and Māsuzai countries, and the Safed Koh. The Khyber Pass between Jamrūd and Landi Kotal originally belonged to the Shinwāris, Zakka Khel, Kuki Khel, and the Orakzai only. At the time of the extension of Sikh rule to Jamrūd the Orakzai were ousted by the Afrīdis, and the only trace of their presence is a ruined village near Jam. The Sikh rule never extended beyond Jamrūd. When Captain Mackeson was negotiating with the Afrīdis in 1840, the Malikdīn Khel Maliks of Chora forced their way between the Zakka Khel and Kuki Khel, and established a small village at Katta Kushta near Alī Masjid. The Sipāh Kambar Khel and Kamrai Khel also, seeing the advantages of a footing in the Khyber, stepped in, and were admitted to a share in the Khyber allowance.

After the Sikh War the Afrīdis took service in large numbers in the Indian army, and when the Mutiny of 1857 broke out they did exceedingly well. From 1857 to 1878 the Afrīdis were subsidized by the Afghān government, who kept a garrison of Afghān troops at Alī Masjid. The Afrīdis were, however, never on good terms with the Afghāns. They very often visited the British officers of Peshāwar District; but relations with them were maintained through the Khalīl and Mohmand Arbābs of Peshāwar District, who were generally of an

intriguing disposition, and very seldom did any real service. Their main object was to keep those tribes in a state of unrest, and thus enhance their own importance. A year or two before the second Afghān War Amīr Sher Alī summoned the *jirgas* of all the Afrīdis and Shinwāris, and distributed about 5,000 rifles among them. When war broke out, and Alī Masjid was attacked and turned, the Afghāns and Afrīdis fled in great disorder, and the Afghāns were robbed of their clothes and rifles by the Afrīdis in the Khyber and in Bāzār. The Afrīdis, and especially the Bāzār Zakka Khel, subsequently harassed the passage of the British troops through the Khyber, and a force was sent against them in December, 1878.

By the Gandamak Treaty of 1879 between the British and Amīr Yakūb Khān, it was agreed that the British Government should retain the control of the Khyber Pass; and, in pursuance of this agreement, allowances were fixed for the Afrīdis, aggregating Rs. 87,540 per annum. The management of the pass was entrusted to the tribesmen themselves through their *maliks*, who executed a formal agreement by which they undertook to guard it with their tribesmen. Some local levies called *jazailchis* (which afterwards became the Khyber Rifles), numbering about 400 men, were also raised for escorting caravans through the Khyber. These were eventually increased to 600 strong.

In 1897 disturbances broke out all along the frontier. The Afrīdis remained quiet for some time, but in August they attacked the Khyber posts and sacked the fortified *sarai* at Landi Kotal. They met with opposition from the Khyber Rifles, but the garrison could not hold out owing to want of water. To punish the Afrīdis for this violation of their engagements, a force was sent into Tīrāh under Sir W. Lockhart, and a fine of Rs. 50,000 and 800 breech-loading rifles was recovered from them by April, 1898. In October of the same year a fresh settlement was made with the Afrīdis, by which they undertook to have no intercourse with any power except the British, and to raise no objection to the construction of railways or roads through the Khyber. On these conditions the allowances were restored, with a small increase of Rs. 250 for the Kambar Khel. The Khyber Rifles were augmented to two battalions of 600 each, 50 of the total being mounted, and were placed under British officers.

The chief subdivisions of the Afrīdi tribe are as follows:—

Section.	*Habitat.*	*Strength (estimated).*
Kambar Khel	Maidān, Bārā Valley; Kajūri Valley	4,500 fighting men.
Kamrai	Bārā Valley	600 " "
Kuki Khel	Khyber; Alī Masjid, Jamrūd	4,000 " "
Malik Dīn Khel	Mardān	5,000 " "
Sepaiah (Sipāh)	Bārā Valley and Kajūrī Plain	1,200 " "
Zakka Khel	Khyber, Bāzār, and Bārā Valley	4,500 " "

Khyrim (*Khairam* or Nongkhrem).—Petty State in the Khāsi Hills, Eastern Bengal and Assam. The population in 1901 was 31,327, and the gross revenue in 1903–4 was Rs. 12,161. The principal products are potatoes, rice, millet, maize, lac, oranges, and cotton; and the chief manufactures, silk, cloth, and iron hoes and billhooks. Deposits of lime, coal, and iron exist in the State, but they are not worked.

Kiamāri.—Formerly an island, now owing to the action of sand-drifts a portion of the mainland on the farther side of Karāchi harbour, Sind, Bombay, situated in 24° 49′ N. and 67° 2′ E., and forming one of the municipal quarters of KARĀCHI CITY, with which it is connected by a tramway road called the Napier Mole, 3 miles long, constructed in 1854 by the North-Western Railway. Kiamāri is the landing-place for passengers and goods destined for Karāchi or dispatch up-country, and contains the Merewether Pier, called after a former Commissioner in Sind, the foundation-stone of which was laid by Lord Ripon in 1880, the Erskine Wharf, the James Wharf, and an oil pier. There are here a commissariat store, a customs house, a dispensary, &c. Kiamāri is a station on the North-Western Railway.

Kichhaunchha (or Ashrafpur-Kichhaunchha).—Town in the Tāndā *tahsīl* of Fyzābād District, United Provinces, situated in 26° 25′ N. and 82° 47′ E., on the bank of a small stream called the Tonrī. Population (1901), 2,325. This place, with the neighbouring villages of Bashkarī and Rasūlpur, is celebrated as having belonged to a famous saint, named Makhdūm Ashraf, who lived in the fourteenth century, or to his descendants, who received rent-free grants from the Mughal emperors. The saint's tomb is built on rising ground in the village of Rasūlpur, and is much resorted to by pilgrims, especially in the month of Aghan (November–December). A visit is believed to be very efficacious for persons possessed by devils. Kichhaunchha is administered under Act XX of 1856, with an income of Rs. 300. A school has 95 pupils.

Kidderpore.—A quarter of Calcutta containing the docks. *See* CALCUTTA.

Kiggatnād.—Southern *tāluk* of Coorg, Southern India, lying between 11° 56′ and 12° 18′ N. and 75° 50′ and 76° 12′ E., with an area of 410 square miles. The population in 1901 was 37,235, compared with 31,230 in 1891. The *tāluk* contains 68 villages, of which Ponnampet is the head-quarters. The west rests upon the Western Ghāts, covered with evergreen forest; the south is bounded by the Brahmagiri or Marenād range, from which ridges of hills branch off throughout the *tāluk*; the east is a continuous stretch of deciduous forest, through which flows the Lakshmantīrtha.

Kila Didār Singh.—Town in the District and *tahsīl* of Gujrānwāla, Punjab, situated in 32° 7′ N. and 74° 5′ E., 10 miles south-west of

Gujrānwāla town, on the road to Hāfizābād. Population (1901), 2,705. The municipality was created in 1867. The income during the ten years ending 1902–3 averaged Rs. 2,900, and the expenditure Rs. 2,800. In 1903–4 the income was Rs. 2,800, chiefly from octroi; and the expenditure was Rs. 3,000.

Kilakarai.—Seaport in the Rāmnād *tahsīl* of the Rāmnād estate, Madura District, Madras, situated in 9° 14′ N. and 78° 48′ E., on the Gulf of Manaar, 10 miles south of Rāmnād town, from which it is separated by a wide morass, all but impassable in the rainy season. It is an untidy and dreary looking town, surrounded by sandy wastes and a little low scrub. The population (11,078 in 1901) consists mainly of Labbais, a Musalmān trading community. Its commerce, which is chiefly in grain, is carried on mainly with Cocanāda and Ceylon. The Labbais are experts in diving for *sankh*-shells (*Turbinella rapa*), which are obtained principally opposite Devipatam, Tirupālakudi, and Rāmeswaram.

Kila Saifulla.—*Tahsīl* of the Upper Zhob subdivision of the Zhob District, Baluchistān, situated between 30° 32′ and 31° 43′ N. and 68° 9′ and 69° 18′ E. It lies along the central part of the valley of the Zhob river, and also includes part of the Toba-Kākar range known as Kākar Khorāsān. Its area is 2,768 square miles, and population (1901) 19,229. The land revenue, including grazing tax, in 1903–4 amounted to Rs. 44,000. The head-quarters station is Kila Saifulla, and the *tahsīl* contains 60 villages. The majority of the people are Sanzar Khel Kākars, who combine flock-owning with agriculture. They cultivate considerable 'rains-crop' areas. The Jogizais, once the ruling family in Zhob, live in this *tahsīl*. Earth-salt is manufactured, and traces of coal have been found. A small trade is done in fox-skins.

Kila Sobha Singh.—Town in the Pasrūr *tahsīl* of Siālkot District, Punjab, situated in 32° 14′ N. and 74° 46′ E., on the banks of the Dengh torrent. Population (1901), 3,338. It was founded in the eighteenth century by the Sikh chief Bhāg Singh, Ahlūwālia, who built a fort here and called it after his son Sobha Singh. It contains a colony of Kashmīrī weavers who weave *pashmina* shawls. Vessels of white metal are also made, but both industries have much decayed of late years. The municipality was created in 1867. The income and expenditure during the ten years ending 1902–3 averaged Rs. 3,900. In 1903–4 the income was Rs. 1,400, chiefly from octroi; and the expenditure was Rs. 3,700. A vernacular middle school is maintained by the District board.

Kilimanūr.—An *idavagay*, or petty principality, in the Chirayinkīl *tāluk* of Travancore State, Madras, situated in 8° 46′ N. and 76° 52′ E. Population (1901), 3,053. It is a freehold estate belonging to the Koil

Tampurāns, who are allied by marriage to the Rānīs of Travancore and thus to the reigning family. The estate was granted about 1728, in recognition of the bravery with which a Koil Tampurān saved a Rānī and heir apparent to the throne of Travancore from their enemies.

Kiling.—River in Nowgong District, Eastern Bengal and Assam. *See* UMIĀM.

Kinchinjunga (*Kānchenjungā*).—A mountain, second only to Everest in elevation, situated in the Eastern Himālayas, on the Sikkim-Nepāl boundary (27° 42′ N., 88° 9′ E.), its summit attaining an altitude of 28,146 feet above sea-level.

'The geological position of Kānchenjungā is obviously in the main axis of the Himālayas, although that mountain lies considerably to the south of the line of water-parting between the Tibetan plateau and India, and on a spur which runs at right angles to this line, so that even the drainage of its northern slopes flows directly down into the Indian plains. . . . The name Kānchenjungā is Tibetan, and means, literally, "The Five Repositories of the Great Glaciers," and it is physically descriptive of its five peaks. . . . The Lepchā name of this mountain is Kong-lo-chu, or "The Highest Screen or Curtain of Snows."' (Waddell, *Among the Himalayas*, 1899.)

Kindat Subdivision.—Central subdivision of the Upper Chindwin District, Upper Burma, containing the KINDAT and TAMU townships.

Kindat Township.—Central township of the Upper Chindwin District, Upper Burma, stretching across the Chindwin river from the Yoma in the west to Shwebo District in the east, between 23° 25′ and 23° 58′ N. and 94° 18′ and 95° 2′ E., with an area of 1,715 square miles. It is covered with forest, thinly populated, and, except in the immediate neighbourhood of the Chindwin, hilly. The population was 11,429 in 1891, and 13,946 in 1901, distributed in 117 villages and one town, KINDAT (population, 2,417), the head-quarters. The area cultivated in 1903–4 was 21 square miles, and the land revenue and *thathameda* amounted to Rs. 42,000.

Kindat Town.—Head-quarters of the Upper Chindwin District, Upper Burma, situated in 23° 44′ N. and 94° 26′ E., on the left bank of the Chindwin river, about 200 miles from the point at which that stream flows into the Irrawaddy. Population (1901), 2,417. The town is well wooded, but low-lying and in many ways unfavourably situated, as in the dry season it is separated by a wide expanse of sand from the river channel and the steamer *ghāt*, and during the rains it occupies a narrow strip of land bounded on one side by the stream and on the other by a large *jhīl* and swampy ground. It is faced across the stream by low wooded hills, but on its own side of the river the immediate surroundings are flat and uninteresting. The native quarter

stretches for some distance along the bank; the civil station lies at its northern end; the jail occupies the farther end of the civil station, and the military police lines are located to the north again of the jail. The civil station, which is protected by embankments from the encroachment of the river on one side and of the *jhīl* on the other, contains the District court and circuit house, the residences of the local officials, and the club. The civil hospital and the post and telegraph offices are in the native quarter. Kindat was a frontier post of some importance in Burmese times, but has never succeeded in attracting much trade, and is still nothing more than a village. The hospital contains 16 beds, and there is a small Anglo-vernacular school. Kindat is not a municipality, and can boast of little in the way of roads or other public improvements.

Kinu.—Eastern township of Shwebo District, Upper Burma, extending from the Irrawaddy to the Mu river, between 22° 38′ and 22° 55′ N. and 95° 27′ and 96° 0′ E., with an area of 244 square miles. It is for the most part a level plain, with a low rainfall. The population was 28,107 in 1891, and 31,499 in 1901, distributed in 120 villages, Kinu (population, 2,223), about 12 miles north of Shwebo on the railway, being the head-quarters. The area cultivated in 1903–4 was 39 square miles, and the land revenue and *thathameda* amounted to Rs. 75,900.

Kinwat.—*Tāluk* in Adilābād District, Hyderābād State, constituted in 1905 out of the northern villages of the former Narsāpur and Nirmal *tāluks*. The head-quarters are at Kinwat (population, 1,514).

Kirākat.—Eastern *tahsīl* of Jaunpur District, United Provinces, comprising the *parganas* of Daryāpār and Biālsī and *tappas* Chandwak, Pisārā, and Guzārā, and lying between 25° 32′ and 25° 46′ N. and 82° 47′ and 83° 5′ E., with an area of 244 square miles. Population fell from 201,546 in 1891 to 187,128 in 1901. There are 455 villages and only one town, Kirākat (population, 3,355), the *tahsīl* head-quarters. The demand for land revenue in 1903–4 was Rs. 180,000, and for cesses Rs. 36,000. The density of population, 767 persons per square mile, is almost equal to the District average. Kirākat is bisected by the Gumtī, which flows from north-west to south-east in a very winding course. The area under cultivation in 1903–4 was 161 square miles, of which 95 were irrigated. There are few tanks or *jhīls*, and irrigation is supplied almost exclusively by wells.

Kiraolī.—North-western *tahsīl* of Agra District, United Provinces, conterminous with the *pargana* of Fatehpur Sīkri, lying between 27° 0′ and 27° 17′ N. and 77° 30′ and 77° 55′ E., with an area of 272 square miles. Population increased from 106,977 in 1891 to 123,812 in 1901. There are 171 villages and two towns, FATEHPUR SĪKRI (population, 7,147) and ACHHNERĀ (5,375). The demand for land revenue in 1903–4 was Rs. 2,51,000, and for cesses Rs. 31,000. The density of

population, 455 persons per square mile, is below the District average. The Utangan flows close to the southern border, while the Khārī Nadī crosses the centre. The eastern portion is level, but in the western half there are hills, the most important being the range on which the town of Fatehpur Sīkri stands. A much shorter and lower range of hills runs parallel to this, north of the Khārī Nadī. Both ranges consist of red sandstone. The area under cultivation in 1903-4 was 210 square miles, of which 67 were irrigated. About one-third of the irrigated area is served by the Agra Canal, and extensions are contemplated. Wells supply the rest, but in many parts the water is so brackish that without good rains it cannot be used.

Kīratpur.—Town in the Najībābād *tahsīl* of Bijnor District, United Provinces, situated in 29° 30′ N. and 78° 13′ E., 10 miles north of Bijnor town. Population (1901), 15,051. There are two quarters of the town, Kīratpur Khās and Basī. The former was founded in the fifteenth century during the reign of Bahlol Lodī, and the latter in the eighteenth century by Pathāns, who built a fort. The walls are still standing near the gateway, and within is a handsome mosque. Kīratpur is administered under Act XX of 1856, with an income of about Rs. 3,600. Trade is insignificant, but lacquered chairs and boxes are made. The District board school has 112 pupils, and six aided schools 216 pupils. The American Methodist Mission has a branch here.

Kirkee (*Kīrki* or Khadki).—Town in the Haveli *tāluka* of Poona District, Bombay, situated in 18° 34′ N. and 73° 51′ E., on the south-east branch of the Great Indian Peninsula Railway, 116 miles south-east of Bombay and 4 north-west of Poona city. Population (1901), 10,797. On November 5, 1817, the first of three battles which led to the collapse of the Marāthā power was fought near Kirkee, then a mere village. The British force under Colonel Burr was 2,800 strong, of whom 800 were Europeans. The Peshwā's force under Bāpu Gokhale numbered 18,000 horse and 8,000 foot, with an immense train of ordnance. The Peshwā Bājī Rao witnessed the battle and his own defeat from Pārbati hill, one mile south of Poona. Kirkee is the principal artillery station in the Bombay Presidency, four field batteries being quartered here. It contains an arms and ammunition factory, employing about 2,000 operatives. The average income of the canton ment fund during the decade ending 1901 was Rs. 22,000. In 1903-4 it was Rs. 28,000, and the expenditure amounted to Rs. 22,000. The town contains an English school. A branch of the Church Missionary Society, stationed here, carries on evangelistic work in the *tāluka*.

Kirli.—Petty State in the DĀNGS, Bombay.

Kirthar Range.—Mountain range forming the boundary between Sind and the Jhalawān country in Baluchistān, between 26° 13′ and

28° 36′ N. and 67° 11′ and 67° 40′ E. From the point where the Mūla river debouches into the Kachhi plain, the range runs almost due south for a distance of 190 miles in a series of parallel ridges of bare rocky hills. At intervals similar ranges run athwart them. The offshoots tail off south-eastwards into Karāchi District, but a single line of low hills extends as far as Cape Monze. The greatest breadth is about 60 miles. The highest point is the Zardak peak (7,430 feet), and another fine peak is the Kuta-ka-kabar, or Kuta-jo-kabar, i. e. 'the dog's tomb' (6,878 feet). The principal offshoot is the Lakhi range. The Kīrthar hills are pierced by the Kolāchi or Gāj river in a fine gorge, and the chief passes are known as the Harbāb, Phusi, Rohel, and Garre. These hills give their name to the Kīrthar geological group of Nummulitic limestone, which is found on their crests, overlaid by Tertiary rocks of Nāri and Gāj beds, the former being soft sandstone and the latter a hard dark-brown limestone exposed on the Gāj river. The tribes residing in the Kīrthar are the Marri and Jamāli Baloch, Jamot and Chuta Jats, and some Khidrāni and Sāssoli Brāhuis. They subsist chiefly by tending flocks, and by exporting the dwarf-palm (*Nannorhops Ritchieana*). Sind ibex and mountain sheep are fairly plentiful, and both black bears and leopards are occasionally met with.

Kishanganj Subdivision.—North-eastern subdivision of Purnea District, Bengal, bordering on Nepāl and lying between 25° 54′ and 26° 35′ N. and 87° 37′ and 88° 32′ E., with an area of 1,346 square miles. The subdivision is a fertile alluvial tract stretching southwards from the Nepāl *tarai*. The population in 1901 was 619,476, compared with 651,039 in 1891. It contains one town, KISHANGANJ (population, 7,671), the head-quarters; and 1,227 villages. The public offices are at present situated at the village of Bhariadāngi, 4 miles north-west of the town; but the courts will shortly be removed to Kishanganj town, where buildings are under construction. The subdivision is the most fertile portion of the District, and is more densely populated than the rest, supporting 460 persons to the square mile. It is more nearly allied to the neighbouring Districts of North Bengal than to Bihār, and the majority of the inhabitants are of Rājbansi (Koch) origin, though most of them are now converts to Islām. The chief markets are at Kishanganj town, Phulbāria, Bibīganj, Gandharbdānga, and Islāmpur.

Kishanganj Town.—Head-quarters of the subdivision of the same name in Purnea District, Bengal, situated in 26° 7′ N. and 87° 56′ E., on the Ganges-Darjeeling road, east of the Mahānandā river. Population (1901), 7,671. Kishanganj is a large exporting centre for rice and jute. It was constituted a municipality in 1887. The income during the decade ending 1901–2 averaged Rs. 7,500, and the

expenditure Rs. 6,800. In 1903-4 the income, which is mainly derived from a tax on persons (or property tax), was Rs. 12,000, and the expenditure was Rs. 8,000. The public offices are at present situated about 4 miles from the town, but new courts are being built at Kishanganj; the sub-jail has accommodation for 23 prisoners. The town contains the head office of the Khagrā Ward's estate; a great fair is held annually under the auspices of the estate, which is attended by some 100,000 persons. A great number of elephants, camels, ponies, sheep, and cattle are sold, and much general merchandise changes hands; the camels are in great demand for sacrifice by Musalmāns at the Bakr-Id festival. Cart-wheels are largely manufactured in the neighbouring village of Chākla, which are used throughout the District and are also exported.

Kishangarh State.—A State lying almost in the centre of Rājputāna, between 25° 49′ and 26° 59′ N. and 70° 40′ and 75° 11′ E., with an area of 858 square miles. It is bounded on the north and north-west by Jodhpur; on the east by Jaipur; on the west and south-east by the British District of Ajmer; and on the extreme south by the Shāhpura chiefship. Leaving out of account five small isolated patches which contain but a village or two each, the territory consists of two narrow strips of land, separated from each other, which together are about 80 miles in length from north to south, and have a breadth varying from 20 miles in the centre to about 2 at the southern extremity. The northern and larger of these two tracts is for the most part sandy, and is crossed by three parallel ranges of hills, running from south-west to north-east, which form part of the Arāvallis, the highest peak being 2,045 feet above the sea; the southern portion of the State is generally flat and fertile. A few streams contain water during, and immediately after, the rains. The Rūpnagar, after a north-easterly course, empties itself into the Sāmbhar Lake, while the Māshi (with its tributary, the Sohadra) and the Dain flow east and eventually join the Banās.

Physical aspects.

The hill ranges and intervening valleys in the north consist of an ancient series of highly metamorphosed sediments known as the Arāvalli system, among the varied strata of which the crystalline limestones constituting white and coloured marbles are especially valuable. The plain in the south-east and south consists principally of gneiss. Numerous igneous intrusions penetrate this rock, and most of them are granitic pegmatites, sometimes with plates of mica of marketable size. Near the capital the intrusions belong to the exceptional group of the eleolite syenites, and are remarkable for containing an extraordinary variety of sodalite, acquiring, when kept in the dark for some weeks, a vivid pink tinge, which disappears in a few seconds on exposure to light, the mineral becoming once more colourless until again

protected. Near Sarwār in the south is a considerable outcrop of mica schists, containing an abundance of garnets remarkable for their size, transparency, and beautiful colouring.

In addition to antelope, 'ravine deer' (gazelle), and the usual small game, there are wild hog and *nīlgai* (*Boselaphus tragocamelus*) in the northern and central portions of the State, and leopards, hyenas, and occasionally wolves in the hills.

The climate is dry and healthy, but malarious fevers are prevalent in October and November. The annual rainfall at the capital averages between 20 and 21 inches, ranging from over 36 inches in 1892 to about 4½ inches in 1899. There is usually less rain to the north and slightly more to the south of the capital.

History.

The chiefs of Kishangarh belong to the Rāthor clan of Rājputs, and are descended from Rājā Udai Singh of Jodhpur. The latter's second son, Kishan Singh, born in 1575, remained in the country of his birth till 1596, when, in consequence of some disagreement with his elder brother, Sūr Singh, then Rājā of Jodhpur, he took up his abode at Ajmer. Obtaining an introduction to Akbar, he received from him the district of Hindaun, now in Jaipur; and subsequently, for services rendered in recovering imperial treasure carried off by the Mers, he obtained a grant of Setholao and certain other districts. In 1611 he founded the town of Kishangarh close to Setholao, which is now in ruins, and from that time the State began to be called by its present name. In Akbar's time Kishan Singh was styled Rājā, but according to the State records Jahāngīr gave him the title of Mahārājā. He died in 1615 and has been followed by sixteen successors. The fourth of these, Rūp Singh (1644–58), was a favourite of the emperor Shāh Jahān, for whom he fought well and gained several victories. He thrice accompanied an expedition to Afghānistān, and was rewarded with a command of 5,000 and several estates, including the fort and district of Māndalgarh, now in Udaipur. Rāj Singh, the seventh chief of Kishangarh (1706–48), fought in the battle of Jājau on the side of Shāh Alam Bahādur Shāh against Azam Shāh, and was wounded; he received a grant of the districts of Sarwār and Mālpura, the latter of which now belongs to Jaipur. His successor, Sāwant Singh, gave half the State to his younger brother, Bahādur Singh, and himself ruled at Rūpnagar in the north. He was a religious recluse, and soon retired to Brindāban, where he died in 1764. His son, Sardār Singh, ruled for two years only; and, his successor being a minor, Bahādur Singh actually governed the whole territory till his death in 1781.

The thirteenth chief was Kalyān Singh (1797–1832), and in his time (1818) Kishangarh was brought under British protection. He soon began to behave in a manner which argued either insanity or a total absence of principle. Becoming involved in disputes with his nobles,

he fled to Delhi, where he busied himself in buying honorary privileges from the titular sovereign, such as the right to wear stockings in the royal presence. Meanwhile affairs grew worse at Kishangarh, and, British territory having been violated by the disputants, the leaders of both parties were called upon to desist from hostilities and to refer their grievances to the mediation of the Government. The Mahārājā was at the same time warned that, if he did not return to his capital and interest himself in the affairs of his State, the treaty with him would be abrogated, and engagements formed with the insurgent Thākurs. This threat brought Kalyān Singh back to Kishangarh, but, finding himself unable to govern the State, he offered to lease it to Government. This offer was refused, and he took up his residence at Ajmer. The nobles then proclaimed the heir apparent as Mahārājā, and laid siege to the capital, which they were on the point of capturing when Kalyān Singh accepted the mediation of the Political Agent, through whom matters were for the time adjusted. The reconciliation with the nobles, however, did not prove sincere, and in 1832 Kalyān Singh abdicated in favour of his son, Mohkam Singh. The latter was succeeded in 1840 by his adopted son, Prithwī Singh, who carried on the administration with prudence and more than average ability. In 1867 a sum of Rs. 20,000 a year was granted by the British Government as compensation for the loss of transit dues owing to the introduction of the railway; in 1877 he received an addition of two guns to his salute for life; and in 1879 a further sum of Rs. 25,000 a year was granted as compensation for suppressing the manufacture of salt and abolishing customs duties of every kind on all articles except spirits, opium, and intoxicating drugs. Mahārājā Prithwī Singh died in 1879, and was succeeded by his eldest son, Sārdūl Singh, who continued the enlightened policy of his father. During his rule many valuable reforms in almost every department were introduced and carried to a successful issue, and in 1892 he was created a G.C.I.E. On his death in 1900 his only son, Madan Singh, the present Mahārājā, succeeded. His Highness, who is the seventeenth chief of the State, was born in 1884, was for some time an under-officer in the Imperial Cadet Corps, and was invested with powers in 1905. The Mahārājā of Kishangarh is entitled to a salute of 15 guns, and in 1862 the usual *sanad* was granted guaranteeing the privilege of adoption.

Population.

The number of towns and villages in the State in 1901 was 221, and the population at each of the three enumerations was: (1881) 112,633, (1891) 125,516, and (1901) 90,970. The decrease during the last decade of over 27 per cent. is ascribed to emigration during the famine of 1899–1900, and to excessive mortality from fever in the autumn of 1900. The State is divided into the five districts or *hukūmats* of Arain, Bāndar Sindri, Kishangarh,

Rūpnagar, and Sarwār. The first four form the northern portion of the territory, with an area of 650 square miles, while Sarwār is the detached tract on the south. All the three towns (KISHANGARH, RŪPNAGAR, and SARWĀR) are municipalities.

The following table gives the chief statistics of area and population in 1901:—

Hukūmat.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Arain	196	...	50	17,994	- 25·8	648
Bāndar Sindri Kishangarh	260	1	76	35,655	- 25·2	2,230
Rūpnagar	194	1	36	17,409	- 29·3	642
Sarwār	208	1	56	19,912	- 31·0	682
State total	858	3	218	90,970	- 27·5	4,207

At the Census of 1901, Hindus numbered 79,670, or more than 87 per cent. of the total; Musalmāns, 7,169; and Jains, 4,081. The majority of the Hindus are said to be Vaishnavas, and the religious head of the Nimbārak Sampradāya (a sect of Vaishnavas) resides at Salīmābād in the Rūpnagar district. The language mainly spoken in the State is a form of Dhūndārī, but in the north many speak Mārwārī.

The most numerous caste is that of the Jāts, who number 16,000, or more than 17 per cent. of the total. Next come the Mahājans (7,600); the Brāhmans (7,100); the Gūjars (6,100); and the Rājputs (5,100), more than half of whom are of the ruling clan. The main occupation of the people is agriculture, nearly 45 per cent. live solely by the land, and there are many others who are partially agriculturists. About 18 per cent. are engaged in industries such as cotton-weaving and dyeing, pottery, work in precious stones, &c.; and nearly 6 per cent. in commerce.

Of the 31 Christians enumerated in 1901, all but one were natives, but their denomination was not returned. The United Free Church of Scotland Mission has a small branch at the capital, and a native pastor of the American Methodist Church resides at Rūpnagar.

Agriculture.

Agricultural conditions vary in different parts of the State. In the north, where the soil is sandy and the rainfall less than elsewhere, there is practically but one harvest, the *kharīf*, and the principal crops are *bājra*, *jowār*, *mūng*, and *moth*. In the centre the soil, though still poor, is firmer, the rainfall heavier, and there are several irrigation works. Maize and *til* take the place of *bājra* in the *kharīf*, while the *rabi* or spring crops consist of barley,

wheat, gram, and cotton. The southern portion of the State is in every way the most favoured, and excellent crops are gathered in both autumn and spring.

Agricultural statistics are available from 1900–1, but only for the *khālsa* area, or land paying revenue direct to the State. This area is estimated at one-third of the total, or about 286 square miles. Returns exist for about 200 square miles, and the net area cropped in 1903–4 was 153 square miles. The areas under principal crops were, in square miles, approximately: *jowār*, 40; barley, 25; maize, 23; *bājra*, 17; *til*, 17; cotton, 11; gram, 7; and wheat, 5. A few acres were also under tobacco, poppy, linseed, and a coarse kind of rice.

The local cattle are described as of the Gujarāti type, being of medium size but capable of hard work. Efforts are being made to improve the breed by importing bulls from Hissār and Nāgaur. A cattle fair is held yearly in August at Sursara, near Rūpnagar. Mule-breeding was started on a small scale in 1901, but is not popular. Sheep and goats are kept in considerable numbers to provide wool, meat, milk, and manure.

Of the net area cropped in 1903–4, 73 square miles, or 48 per cent., were irrigated: namely, 30 from tanks, 38 from wells, and 5 from other sources. The subject of irrigation has for the last forty years received the special attention of the Darbār, and very few sites for tanks now remain in the central and southern districts. In the *khālsa* area alone there are 175 tanks and 2,500 wells available for irrigation.

There are no real forests, but several blocks of scrub jungle and grass, having a total area of 41 square miles, are protected. The sale of timber, grass, and minor produce brings in about Rs. 18,000 a year, and the annual expenditure is about Rs. 4,000.

The principal minerals now worked are garnets near the town of Sarwār. The Silora stone quarries near the capital yield slabs excellent for roofing and flooring, and are managed by the State Public Works department. The yearly out-turn is about 40,000 cubic feet, valued at Rs. 10,000. The white marble quarries at Tonkra will supply material for the proposed Victoria Memorial Hall at Calcutta; a pink variety is found at Narwar, west of the capital, and a black at Jhāk and other places in the north. A black mineral paint, discovered in 1886, has been successfully tried on the Rājputāna-Mālwā and Jodhpur-Bīkaner Railways and on ocean steamers.

Trade and communications.

The indigenous industries consist of the manufacture of chintzes and coloured cloths, lace, and drinking vessels and bottles made from *khas-khas* grass (*Andropogon muricatus*). The establishment of mills and factories as joint-stock concerns with limited liability under a local Company Act has been encouraged. There are two steam hydraulic cotton-presses

worked by the State, which in 1903–4 employed an average of 182 hands and pressed about 520 tons of cotton and wool. One of these is at the capital, where also there is a spinning- and weaving-mill and a soap factory.

The chief exports are cotton, wool, caraway, and *ghī*, while the chief imports are sugar, salt, piece-goods, and cereals. A good deal of the cotton is exported to Agra, Alīgarh, Cawnpore, and Hāthras.

Since 1875 the Rājputāna-Mālwā Railway has traversed the northern portion of the State from south-west to north-east; its length within Kishangarh territory is about 13 miles, and there is one station—at the capital. The total length of metalled roads is 35 miles, and of unmetalled roads 80 miles. The Government of India maintains 28 miles of the metalled roads: namely, 10 miles of the Agra-Ahmadābād road and 18 miles of the Nasīrābād-Deoli road.

There are four British post offices in the State, three of which are also telegraph offices. The Darbār has also its own postal system and postage stamps, maintaining thirteen local post offices and ten runners over a length of 65 miles. The postal income and expenditure are about Rs. 2,400 and Rs. 1,000 respectively.

Famine.

The State has suffered from constant scarcities. In 1755–6 the fort at the capital, and in 1783–4 the town walls, were built as relief works. The records show that there was famine in 1803–4, in 1848–9, and more or less continuously between 1868 and 1872. In 1891 the rainfall was less than 8 inches; the crops failed, and fodder was very scarce. One-fifth of the people emigrated, and more than 42,000 cattle died. The average number relieved daily for a period of eight months was 1,400, and the total expenditure, including loans to agriculturists, was 1·8 lakhs. The worst famine of which there is any detailed account was that of 1899–1900. The preceding two years had been indifferent ones; the rainfall in 1899 was barely 4½ inches, the *kharīf* crop failed entirely, and the whole State was affected. The measures adopted by the Darbār were wise and humane, and the relief was both effective and economical. The works were mainly irrigation projects, but the garnet quarries also afforded useful and congenial employment. More than five million units were relieved on works, or gratuitously, and the total expenditure exceeded 3·5 lakhs. Owing to scarcity of fodder and water, 70 per cent. of the cattle are said to have perished. There was again famine in 1901–2, and one million units were relieved at a cost (including remissions of land revenue) of about 1·7 lakhs.

Administration.

The administration is carried on by the Mahārājā, assisted by a Council of two members, the senior of whom is styled Dīwān. The head-quarters district of Kishangarh is directly under the Revenue Commissioner, while each of the

remaining *hukūmats* is under an official called *hākim*. In each district are several *tahsīldārs* and *naib-tahsīldārs*, who are purely revenue officers.

For the guidance of its judiciary the State has its own Codes and Acts, based largely on those of British India. Of the four *hākims*, one has the powers of a third-class magistrate, and the rest are second-class magistrates, while all of them can try civil suits of any value arising in their respective districts. Criminal cases beyond their powers are heard by the Sadr Faujdāri Court, the presiding officer of which has the powers of a first-class magistrate and is also magistrate for the Kishangarh district. The civil work of the latter district is disposed of partly by the Small Cause Court, and partly by the Sadr Dīwāni, or chief civil court. The next tribunal is the Appellate Court, which, besides hearing all appeals (civil and criminal), has the powers of a Sessions Judge. The Council is the highest court in the State; it hears special appeals, exercises general supervision, and when presided over by the Mahārājā can pass death sentences.

The normal revenue of Kishangarh is about 4·6 lakhs, and the expenditure 4·2 lakhs. The chief sources of revenue are: land (including irrigation), 1·5 lakhs; customs (including Rs. 45,000 received as compensation from the British Government), Rs. 60,000; cotton-mill and presses, &c., Rs. 25,000; and judicial (including stamps), Rs. 21,000. The main items of expenditure are: administrative staff (civil and judicial), 2·0 lakhs; palace and privy purse, Rs. 70,000; army and police, Rs. 40,000; and public works (including irrigation), Rs. 33,000. The financial position is sound; for while there are no debts, there is a considerable cash balance and a further sum of about 2·8 lakhs is invested in Government securities and the local cotton-presses, mills, &c.

The State has its own coinage, and there have been several issues since the mint was started. The rupee now most common is known as the *Chaubīsania* (twenty-fourth year); once worth about thirteen British annas, it now exchanges for barely eleven, and it is proposed to convert the local currency when the rate becomes more favourable.

The land tenures are the usual *jāgīr*, *muāfi*, and *khālsa*. The *jāgīrdārs* have to serve with their quota of horsemen, or make a cash payment in lieu, and ordinarily attend the Mahārājā on his birthday and certain festivals. Their estates descend from father to son, or, with the sanction of the Darbār, to an adopted son, but are liable to resumption for serious offences against the State. *Muāfi* grants, or lands held by individuals such as Brāhmans, Chārans, and Bhāts, or by charitable and religious institutions, are rent free, inalienable, and may be resumed on failure of heirs. In the *khālsa* area or crown lands the cultivators are for the most part tenants-at-will,

liable at any time to be dispossessed, though they are rarely evicted. The land revenue is generally paid in kind, the Darbār's share varying from one-fourth to one-third of the produce. In some parts, however, and in the case of such crops as cotton, poppy, maize, tobacco, and spices, the revenue is collected in cash, the rates varying from Rs. 6 to Rs. 18 per acre. Special concessions are made to those who bring new land under cultivation or sink new wells; they pay the Darbār one-ninth, or sometimes one-eleventh, of the gross produce the first year, one-eighth or one-tenth in the second year, and so on till the usual one-third is reached.

The military force consists of 220 regulars (84 cavalry and 136 infantry) and 1,739 irregulars (836 cavalry and 903 infantry). The irregular cavalry are supplied by the *jāgīrdārs*. There are 65 guns, serviceable and unserviceable, and 35 artillerymen.

Police duties are performed by a force of 511 of all ranks, including 187 Rājput sepoys from the irregular infantry, and 91 village *chaukīdārs*. There are nine police stations and numerous outposts, the latter being mostly manned by the *jāgīr* militia. Besides the Central jail and a small prison for persons under trial at the capital, there are three district jails—at Arain, Rūpnagar, and Sarwār—in which persons sentenced to one month or less are confined. These five jails have accommodation altogether for 153 prisoners.

In the literacy of its population Kishangarh stands fourth among the twenty States and chiefships of Rājputāna, with 4·6 per cent. (8·4 males and 0·4 females) able to read and write. There are now 29 educational institutions in the State, attended by about 1,000 pupils, of whom 70 are girls. Of these schools, 17 are maintained by the Darbār at a cost of about Rs. 6,500 a year, 2 by the United Free Church of Scotland Mission, and the rest by private individuals. The only secondary school is the Mahārājā's high school at the capital. An education cess calculated at 1 per cent. of the land revenue has been imposed since 1907.

The State possesses one hospital and three dispensaries; and in 1904 the number of cases treated was 25,584, of whom 95 were in-patients, and 655 operations were performed. The total expenditure was about Rs. 5,000.

Vaccination is backward. In 1904–5 the number of persons successfully vaccinated was 1,880, or about 21 per 1,000 of the population.

Kishangarh Town.—Capital of the State of the same name in Rājputāna, situated in 26° 34′ N. and 74° 53′ E., on the Rājputāna-Mālwā Railway, about 18 miles north-east of Ajmer city, and 257 miles south-west of Delhi. It takes its name from Kishan Singh, the first chief, who founded it in 1611. Population (1901), 12,663.

The town and fort occupy a picturesque position on the banks of an old lake, over a square mile in extent, called Gūndolao, in the centre of which is a small garden known as the Mohkam Bilās. The Mahārājā's palace is in the fort and commands a fine view of the surrounding country. The principal industrial occupations of the people are cloth-weaving, dyeing, the cutting of precious stones, and the manufacture of drinking vessels and betel-nut boxes from *khas-khas* grass. A municipal committee, established in 1886, attends to the lighting, conservancy, and slaughter-house arrangements. The town possesses a combined post and telegraph office; a couple of jails, with accommodation for 123 prisoners; a hospital, with beds for 12 in-patients; and 11 schools, attended by about 400 boys and 50 girls. Of these schools, three are maintained by the State and two by the United Free Church of Scotland Mission. The Mahārājā's high school is affiliated to the Allahābād University, and teaches up to the middle standard in both English and vernacular: the number on its rolls is 294, and the daily average attendance 270. About a mile and a half north of the town and close to the railway station, a flourishing suburb, called Madanganj after the present chief, has sprung up. It contains a steam hydraulic cotton-press, and a spinning- and weaving-mill. The latter, which was opened in 1897, has 10,348 spindles and employs about 500 hands. In 1904 the total out-turn exceeded 685 tons of yarn, and the receipts were about 4.6 lakhs.

Kishenganj.—Subdivision and town in Purnea District, Bengal. *See* KISHANGANJ.

Kishorganj Subdivision.—South-eastern subdivision of Mymensingh District, Eastern Bengal and Assam, lying between 24° 2′ and 24° 38′ N. and 90° 35′ and 91° 16′ E., with an area of 985 square miles. The population in 1901 was 719,184, compared with 643,381 in 1891. It contains two towns, KISHORGANJ (population, 16.246), the head-quarters, and BĀJITPUR (10,027); and 1,661 villages. It is an alluvial tract, intersected by marshes, and is subject to annual inundations and deposits of fertilizing silt from the Meghnā and its tributaries. It is, after Tangail, the most populous subdivision in the District, the density being 730 persons per square mile, against an average of 618 for the whole District. There are important markets at BHAIRAB BĀZĀR, KARĪMGANJ, and KATIĀDI.

Kishorganj Town.—Head-quarters of the subdivision of the same name in Mymensingh District, Eastern Bengal and Assam, situated in 24° 26′ N. and 90° 46′ E., on the Kundāli Khāl, 13 miles east of the Brahmaputra. Population (1901), 16,246. An annual fair is held here during the Jhulanjātra, a festival in honour of Krishna lasting for a month from the middle of July to the middle of August. Kishorganj

is connected with the Brahmaputra by a road and also by the Kundāli Khāl, which is navigable during the rainy season. The town was formerly noted for its muslin manufactures, and the East India Company had a factory here. Kishorganj was constituted a municipality in 1869. The income during the decade ending 1901–2 averaged Rs. 6,500, and the expenditure Rs. 6,200. In 1903–4 the income was Rs. 8,000, of which Rs. 4,600 was obtained from a property tax; and the expenditure was Rs. 7,800. The town contains the usual public offices; the sub-jail has accommodation for 22 prisoners.

Kistna District (*Krishna*).—District on the north eastern coast of the Madras Presidency, lying between 15° 37′ and 17° 9′ N. and 79° 14′ and 81° 33′ E., with an area of 8,498 square miles[1].

Physical aspects.

It is bounded on the east by the Bay of Bengal; on the west by the Nizām's Dominions and Kurnool District; and on the north and south by the Districts of Godāvari and Nellore respectively. It is named after the great river which flows along much of its western boundary, and then, turning sharply, runs right across it from north-west to south-east, and forms its most striking natural feature. On the extreme west the District consists of stony uplands, dotted with rocky hills or crossed by low ranges; the centre and north are a level plain of black cotton soil; but the eastern portion is made up of the wide alluvial delta of the Kistna river, an almost flat expanse, covered with irrigated rice-fields, and containing some of the most fertile land in the Presidency. These three tracts form three sharply differentiated natural divisions. The coast is fringed with a wide belt of blown sand, sometimes extending inland for several miles. Along the shore the dunes rise to the height of from 30 to 50 feet. The only hills of any note are those in the west of the District. They are outliers of the great chain of the EASTERN GHĀTS, and the Palnād *tāluk* is almost surrounded by them. Besides the Kistna, there are no rivers, except a few fitful hill torrents and three or four minor tributaries of the great river. The Gundlākamma, which rises in Kurnool, traverses a corner of the Vinukonda *tāluk* from west to east and then passes into Nellore. The COLAIR LAKE (Kolleru) lies within the District.

The broad central belt of low-lying country, situated at the foot of the Eastern Ghāts and sloping towards the sea, is covered by Archaean gneisses. These consist of a thinner-bedded schistose series (which

[1] While this work was under preparation the area of the District was changed, the *tāluks* of Ellore, Yernagūdem, Tanuku, Bhīmavaram, and Narasapur (excluding Nagaram Island) being added to it from Godāvari District, and those of Tenāli, Guntūr, Sattanapalle, Palnād, Bāpatla, Narasaraopet, and Vinukonda being formed with the Ongole *tāluk* of Nellore) into a new Guntūr District. The present article refers to the District as it stood before these alterations.

includes mica and chloritic schists with quartzites), and of more massive granitoid gneisses, all much interbanded and disturbed. They are also pierced by occasional younger dioritic dikes, granite, felsite, and quartz veins. North-west of this Archaean belt comes the more elevated, often plateau-like, country of the Cuddapah and Kurnool series of the Purāna group. This is an enormous series (aggregating over 20,000 feet thick) of unfossiliferous, but little altered, sedimentary strata, gently inclined as a whole. They comprise repetitions of quartzitic and shaly sub-series, with occasional conglomerates and limestones, and interbedded traps near the base. The Kurnools overlie the Cuddapahs unconformably, forming numerous plateaux, and possess a basal diamantiferous conglomerate. South-east of the Archaean band are a few scattered outliers of the much younger Upper Gondwānas, with plant beds and Jurassic marine shells, a double sandstone series with shales between; and these in turn underlie a little sub-recent Cuddalore sandstone, and great stretches of coastal and deltaic alluvium with a few patches of lateritic rock.

The flora of the District presents no special characteristics, the plants being mainly the usual cultivation weeds of the Coromandel coast. Along the sandy shore are found the usual sand-binders, *Spinifex squarrosus* and *Ipomoea*; and cashew-nut trees (*Anacardium occidentale*) occur in scattered nooks. The principal crops and forest trees are referred to later. Generally speaking, the District is very bare of tree growth.

Wild animals are far from plentiful. Tigers and *sāmbar* are found in the Palnād and Vinukonda jungles, on the Medasala Durga ridge, and on the Kondapalli and Kondavīd hills. Leopards and an occasional bear lurk in the rocky eminences of some of the inland *tāluks*. A few antelope are to be seen in the Bāpatla *tāluk*, and wild hog are not uncommon in various parts. Bird life is more prominent. Almost every species of South Indian feathered game, except the woodcock and hill partridge, is to be found in the District. Snipe, duck, and teal abound in the season: and the Colair Lake is the home of almost all the known inland aquatic birds. It is also fairly stocked with fish.

The climate of the District, although in parts trying owing to the great heat, may be set down as healthy. Fever is on the whole uncommon. Masulipatam (the head quarters), with a mean temperature of 82°, a recorded maximum of 117°, and a minimum of 58°, possesses perhaps the most equable climate; and on the coast generally, except for a short time in the month of May, the heat is never unbearable. The temperature of the Palnād, Sattanapalle, Nandigāma, and Tiruvūr *tāluks* during November, December, and January resembles that of the Mysore plateau, the thermometer falling to 65°; but the temperature becomes extremely high during May and June.

Of the rainfall, nearly two-thirds is usually registered during the south-west monsoon, the first showers of which begin to fall in May. The remainder of the supply is received in the three last months of the year, but the fall in October and November is as a rule much more irregular than in the earlier months. It is at times exceedingly heavy, owing to the cyclones that often visit the coast. The annual rainfall for the District as a whole during the thirty years from 1870 to 1899 averaged 33 inches. But this is not evenly distributed; as elsewhere along this coast, the fall in the coast tracts, such as Masulipatam, Tenāli, and Bāpatla, is considerably heavier than that in the inland *tāluks* of Palnād, Sattanapalle, and Narasaraopet. Scarcity has been known in one or two bad years, but the pinch of real famine has not been felt since the Kistna irrigation system was completed. Floods, however, are frequent. In 1874, 1875, 1882, 1895, 1896, and 1903 they did damage which was sometimes very great. All of them were due to the Kistna overflowing its banks. The highest flood on record in the river was in 1903, when the water breached the bank of the main canal and submerged much of the delta. Masulipatam, the District head-quarters, has twice been visited by disastrous tidal waves. In 1779 the sea flowed 12 feet deep through the Dutch factory, a great part of the town was washed away, and at least 20,000 persons were drowned and lay unburied in the streets. In 1864 an even worse wave inundated the place. The sea penetrated 17 miles inland, submerging 780 square miles and drowning as many as 30,000 people.

History.

The earliest known rulers of the District were the Buddhist dynasty of the Andhras, who built the *stūpa* at AMARĀVATI and whose curious leaden coins are still occasionally found. Following them came, about the beginning of the seventh century A.D., the Brāhmanical Eastern Chālukyas, the excavators of the cave temple at UNDAVALLE and other rock-cut shrines. About 999 they in their turn were supplanted by the CHOLAS. The latter some two centuries later gave place to the Garpatis of Warangal, during whose rule Marco Polo landed in the District at Motupalle, now an obscure fishing village in the Bāpatla *tāluk*. The District then came under a dual sway, the kings of Orissa ruling the northern part, while the south fell into the hands of a line of cultivators who rose to considerable power and are known to history as the Reddi kings. The ruins of their fortresses at KONDAVĪD, BELLAMKONDA, and KONDAPALLI are still to be seen. In 1515 king Krishna Deva of Vijayanagar wrested the north of the District from the Gajapati kings of Orissa; and it passed, on the fall of the Vijayanagar empire in 1565, to the Kutb Shāhi line of Golconda, and was eventually absorbed (on the destruction of that dynasty in 1687) in the empire of Aurangzeb.

In 1611 the English founded their second settlement in India at

Masulipatam, which continued to be their head-quarters until these were finally removed to Madras in 1641. Three years after the founding of the English settlement came the Dutch, and in 1669 the French followed. It was not, however, till the year 1750 that any of the European powers exerted any political influence in the District. Two years after that date the Sūbahdār of the Deccan granted the whole of the NORTHERN CIRCĀRS to the French, and it was from them that this tract finally passed to the English. On the outbreak of hostilities in 1758, Colonel Forde, who was sent by Clive from Bengal to attack the French in the Northern Circārs, defeated them at Condore in Godāvari District, and following them to Masulipatam besieged them there. Faced by a strong garrison in front and hemmed in behind by the Sūbahdār of the Deccan, the ally of the French, his ranks rapidly thinning with disease, Forde, as a counsel of despair, at length made an almost desperate night attack upon the Masulipatam fort and captured it. As a consequence of this victory, first the divisions of Masulipatam, Nizāmpatam, and part of Kondavīd, and later the whole of the Circārs, passed, by a grant from the Sūbahdār of the Deccan (confirmed by the emperor Shāh Alam in 1765), to the Company. With the cession of the Palnād in 1801 by the Nawāb of Arcot, the entire District finally became British territory. At first it was administered by a Chief and Council at Masulipatam, but in 1794 Collectors directly responsible to the Board of Revenue were appointed at Guntūr and Masulipatam. In 1859 these two Collectorates (except two *tāluks* of the latter) were amalgamated into one District.

The most interesting archaeological remains in the District are its Buddhist antiquities, and the chief of these is the great *stūpa* at AMARĀVATI in the Sattanapalle *tāluk*. This was discovered in 1796, and a portion of the sculptured marble rails of the processional circle was sent by Sir Walter Elliot to England, where it now lines one of the staircase walls in the British Museum. The Government Museums at Madras and Calcutta contain other pieces of the work. From inscriptions it is evident that the temple of Amareswara in the same village was originally a Buddhist or Jain sanctuary, and in the neighbourhood are several mounds which may perhaps contain other relics of these faiths. In the Tenāli *tāluk* are the ruins of Chandavolu, a place of great antiquity containing a temple and Buddhist mound, and Buddhist *stūpas* exist at JAGGAYYAPETA and GUDIVADA. Gold coins have been found at Chandavolu, and in 1874 some workmen came upon several masses of molten gold as large as bricks. There was formerly a fine Buddhist *stūpa* at BHATTIPROLU. Here a curious relic, consisting of a piece of bone (supposed to have been one of Buddha's bones) enclosed in a crystal casket lodged in a soapstone outer case, was found a few

years ago. In the Vinukonda *tāluk* stone circles (dolmens) abound and inscriptions are numerous.

Population.

Kistna comprises the thirteen *tāluks* and *tahsīls* of which statistical particulars are given below:—

Taluk or *Tahsil.*	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile	Percentage of variation in population between 1891 and 1901	Number of persons able to read and write.
Bezwāda	422	1	107	124,170	295	+ 16.6	8,189
Tiruvur	338	...	89	69,219	205	+ 13.3	2,291
Nūzvīd	789	1	231	188,761	240	+ 22.0	7,427
Nandigama	677	1	169	139,958	206	+ 10.[illegible]	5,555
Gudivāda	595	1	212	151,916	256	+ 28.4	6,751
Bandar	740	1	191	214,316	290	+ 8.0	15,440
Guntūr	500	2	109	200,557	402	+ 20.2	13,083
Sattanapalle	714	..	168	159,645	224	+ 15.2	6,803
Tenāli	644	1	150	288,127	448	+ 29.3	12,860
Narasaraopet	713	1	174	168,547	237	+ 7.[illegible]	7,270
Palnād	1,041	...	96	153,638	148	+ 8.2	5,979
Vinukonda	646	1	71	82,493	128	+ 0.1	3,741
Bāpatla	679	3	111	213,450	315	+ 1.73	12,050
District total*	8,498	13	1,818	2,154,803	254	+ 16.1	107,439

* The area of the new Kistna District is 5,8[illegible]9 square miles, and its population 1,744,138.

The head-quarters of the Bandar *tāluk* are at Masulipatam, of Nūzvīd at Gannavaram, and of Palnād at Gurazāla. Those of the other ten *tāluks* are at the places from which they are named. The population of the District in 1871 was 1,452,374; in 1881, 1,548,480; in 1891, 1,855,582; and in 1901, 2,154,803. During the last thirty years it has increased by 48 per cent., which, excluding the exceptional case of the Nīlgiris, is the highest rate for any District in the Presidency; and in the decade ending 1901 its growth was at the rate of 16 per cent., which was more rapid than in any other District. Of the nine *tāluks* in the Presidency which showed the highest rates of increase in that period, four—namely, Tenāli, Gudivāda, Nūzvīd, and Guntūr—are in Kistna. Some of this growth is due to immigration, chiefly from Nellore and Vizagapatam. It is most conspicuous in the delta; but even there, except in Tenāli, the density of the population is still much less than in the neighbouring delta of the Godāvari, and the rates of increase will probably continue to be high in future. The chief towns are the municipalities of MASULIPATAM, BEZWĀDA, and GUNTŪR, while CHĪRĀLA and TENĀLI are the two most populous Unions. Of the total population, 1,912,914, or 89 per cent., are Hindus; 132,053, or 6 per cent., Musalmāns; and 101,414, or 5 per cent., Christians. The number of these last almost trebled during the twenty years ending 1901, and between 1891 and 1901 advanced by nearly 33,000, a larger

increase than in any other District. In 1901 Christians formed a higher proportion of the population than in any other District north of Madras City.

Five per cent. of the people speak Hindustāni. Telugu is the vernacular of practically all the rest, and is the prevailing language in every *tāluk*. A peculiarity of the population is that it comprises fewer females than males, there being 976 of the former to every 1,000 of the latter. This characteristic occurs also in six other Districts which form, with Kistna, a fairly compact block of country in the centre of the Presidency.

Of the Hindus, 97 per cent. belong to Telugu castes. The Kammas (311,000) and Telagas (cultivators, 148,000) are in greater strength than in any other District; as also are the Mādigas (leather-workers, 142,000), the Telugu Brāhmans (106,000), and the Komatis (traders, 81,000). Brāhmans of all classes number nearly 6 per cent. of the total Hindu and Animist population, which is an unusually high proportion. Among other castes which are commoner in Kistna than elsewhere may be mentioned the Bogams (dancing-girls), and the three beggar communities of the Bandas, Budubudukalas, and Vipravinodis. The latter beg only from Brāhmans, and will only do their juggling tricks, for which they are famous, if a Brāhman be present. Of the Musalmāns, an overwhelming majority returned themselves as Shaikhs, but Pathāns and Saiyids are fairly plentiful, while Mughals are more than twice as numerous as in any other District.

The occupations of the people differ singularly little from the normal. Agriculture, as usual, enormously preponderates.

At the Census of 1901 there were 101,414 Christians in Kistna District, of whom 100,841 were natives. The most numerous sect is that of the Baptists (39,027). The Lutheran and allied denominations number 34,877; while the Roman Catholic and Anglican communions are fairly equal in strength, possessing 14,511 and 11,157 members respectively.

The pioneers of Christianity in the District belonged to the Roman Catholic Church, being Jesuits who came out to India after the founding of the well known mission at Madura. Little is now on record regarding their operations, but it is clear that their efforts were less continuous and strenuous than in Districts farther south. The suppression of the Society of Jesus in 1773 almost entirely checked their enterprise, and for many years few priests were left in the District, and some of the converts went back to Hinduism. In 1874 matters revived, four priests coming out from Mill Hill; and since then more has been done.

The Protestant missions are of much more recent origin. The best known of their missionaries, the Rev. Robert Noble, came to Masuli-

patam in 1841 under the auspices of the Church Missionary Society, and worked there without intermission for twenty years, founding the college at Masulipatam which bears his name. The American Lutheran Mission was started at Guntūr in 1842. Its converts are chiefly from the lower castes, and it works at Guntūr and Narasaraopet. The Baptists began operations in 1866, but their converts outnumber those of any other denomination.

Agriculture.

As has been mentioned, the District consists of three dissimilar areas: namely, the Palnād and the neighbouring tracts, where much of the soil is formed of detritus from the hills; the wide plain of the rest of the uplands, where it is black cotton soil; and the delta, which is for the most part alluvial. Agricultural practice naturally differs according to the soil, the lighter land requiring only slight showers, the cotton country needing a thorough soaking, and the delta having to wait until the floods come down the river. There are three general classes of crop, corresponding more or less to the seasons: namely, the *punāsa*, or early crop, sown just after the first burst of the monsoon in May or June; the *pedda*, or big crop, between July and September; and the *paira*, or late crop, put down in November. The sowing of the 'wet' land is principally done from July to October, by the middle of which month more than four-fifths of it should have been completed.

As much as one fourth of the District consists of *zamīndāri* and *inām* lands. For the former of these no detailed particulars are on record. The area for which accounts are kept is 6,487 square miles, details of which, for 1903-4, are appended:—

Tāluk.	Area shown in accounts.	Forests.	Cultivable waste.	Cultivated.	Irrigated
Bezwāda . .	252	50	4	146	33
Nūzvīd . .	4	...	..	3	2
Nandigāma . .	437	41	4	346	12
Gudivāda .	523	7	114	325	222
Bandar . .	437	103	129	158	41
Guntūr . .	497	13	3	413	10
Sattanapalle .	715	129	16	484	3
Tenāli . . .	645	15	51	485	315
Narasaraopet	696	45	24	545	9
Palnād . . .	1,041	354	89	502	6
Vinukonda . .	571	173	44	309	7
Bāpatla	689	47	67	484	117
Total	6,487	1,001	545	4,200	777

The staple crop is rice, which in 1903-4 occupied 860 square miles, or 25 per cent. of the total area under cultivation. This is of two main kinds: white paddy, which is irrigated and transplanted; and black paddy, which grows with the help of rain alone. The

latter is found only in two or three Districts besides Kistna, and is largely exported to Jaffna. *Cholam* (*Sorghum vulgare*), which occupied 590 square miles in 1903–4, is the principal 'dry' cereal crop, and next in importance is *cambu* (*Pennisetum typhoideum*). Of industrial crops, cotton, which is chiefly produced in Palnād and Sattanapalle, occupied 377 square miles. The area under indigo has fallen from 180 square miles in 1896–7 to 40 square miles in 1903–4, the decline being attributable to the competition of the synthetic dye. Tobacco, which is largely exported to Burma, was grown on 28,000 acres. Castor occupied 39,000 acres, but the cultivation and trade in this product are gradually falling off.

During the period of thirty-one years from 1872–3 to 1903–4, an increase of 12 per cent. occurred in the total extent of holdings. The most noticeable advance was in the 'wet' cultivation, the extent of which has more than doubled; the increase in 'dry' holdings was comparatively small. In point of quality, cultivation has probably receded rather than improved since the introduction of irrigation from the Kistna. The delta ryot finds that he can grow a crop sufficient for his needs with little trouble, and ploughing is done in a perfunctory fashion, while weeding is not necessary under the transplantation system. Little advantage has been taken of the Land Improvement Loans Act, the amount advanced in sixteen years ending 1903–4 being only Rs. 28,000. Most of this was, as usual, spent in digging or repairing wells.

The large extent of pasture in the upland regions affords exceptional facilities for rearing stock. Excellent cattle of the Nellore breed are found in the Palnād, Narasaraopet, and Vinukonda *tāluks*. These animals, though very powerful and useful for heavy draught, are slow, and deteriorate quickly if called on to work where the grass is not as good as in their native places. In the delta the want of fodder is severely felt, and the cattle are generally of poor quality. Sheep are fairly plentiful. They have, as a rule, short, coarse, red or brown hair, and are extremely leggy.

The total area irrigated in the District is 777 square miles, as shown in the table given above. Practically the whole of it is in the delta *tāluks* of Tenali, Gudivāda, Bāpatla, and Bandar, where it depends upon the Kistna river. Nearly 90 per cent. of the irrigated area is supplied from Government canals, only 7 per cent. from tanks, and only 1½ per cent. from wells. The Kistna irrigation is led from the great dam across the river at BEZWĀDA, which is 3,714 feet long and rises about 20 feet above the bed of the stream. It was finished in 1854, and feeds the ten main canals which irrigate the delta and branch off into smaller and smaller channels until they cover every part of it. Vast as is the quantity of water utilized by this great

system, a large amount of flood-water still runs to waste over the dam: but, as the river is not filled by the rains of the north-east monsoon, there is little water in it at the end of the year, and the area that grows two crops is therefore so small as to be negligible. A project to form an enormous reservoir higher up the river, where it runs between very steep, high banks, has accordingly been investigated; this would not only supplement the supply at the dam at Bezwāda, but would also command large areas in the upland *tāluks* above that dam. It is estimated that by this means the irrigable area might be doubled. Even under existing conditions the value of the irrigated crops is estimated at 215 lakhs annually, the greater part of this representing the value of the rice crop.

Among minor irrigation works may be mentioned a dam built across the Muneru at Polampalli, by which 3,400 acres were watered in 1903-4. A dam has also been constructed across the Palleru at Katchavaram in the Nizām's Dominions, which is at present held on lease by private individuals. All the area supplied from it, which is not very great, lies within British territory. In the uplands irrigation is from tanks, but none of them is of any great size and the total area commanded is inconsiderable. A scheme to irrigate 50,000 acres in the Divi Island in the delta by steam pumping has recently been started.

There is now very little real forest within the limits of the District, although the hills in the Palnād and those to the north-west of Vinukonda are said to have once been covered with trees. The 'reserved' forests cover about 1,000 square miles, of which more than a third is in the Palnād, and much of the remainder in Vinukonda and Sattanapalle. The most notable species are *Pterocarpus*, *Terminalia*, *Anogeissus*, and *Lagerstroemia*. Casuarina has been planted by private enterprise on considerable areas of the sandy wastes along the coast. On the Kondapalli hills is found a light wood known as *ponuku* (*Gyrocarpus Jacquini*), which is used in the manufacture of the well-known Kondapalli toys. In 1903-4 the forest receipts amounted to Rs. 1,49,000, and the working expenses, inclusive of establishment charges, to Rs. 74,000.

Except building stones, among which the marble used in the Amarāvati *stūpa* deserves special mention, the District contains few minerals of economic value. Iron occurs in small quantities and was formerly smelted by native methods; and copper used to be found in Vinukonda. The most interesting mining operations which have been conducted were those in search of diamonds, before the country came into British hands. In the sixteenth and seventeenth centuries, when the Sultāns of Golconda ruled over Kistna, this mining was carried on extensively at Malavalli and Gollapalli in the Nūzvīd country, at Kollūr

in Sattanapalle, and at Partiāla west of Kondapalli. The first two of these mines were still being worked in 1795 when Dr. Heyne visited the spot. The earliest trustworthy account of the industry is that of Tavernier, the French jeweller, who visited the Kollūr mines in the seventeenth century. He says that 60,000 men were at work in them; and this would account for the ruins of extensive habitations which are still to be seen on what is now a most desolate spot. He speaks of a great diamond 900 carats in weight being found there and sent to the emperor Aurangzeb. This gem is supposed by some authors to be the famous Koh-i-nūr. The Pitt, or Regent, diamond (now among the French crown jewels) is said in one account to have been found at Partiāla, but Governor Pitt always kept the history of this stone a close secret.

Trade and communications.

Kistna is of importance from an agricultural rather than an industrial point of view, and the arts and manufactures in it are few. All over the District the weaving of coarse cloth from the wool of sheep and goats is carried on, but the market for the product is purely local. Tape for cots is made in the Palnād and Vinukonda *tāluks*. Rough carpets are manufactured at Vinukonda, and mats at Ainavolu. In former years fine carpets were exported to England from Masulipatam. The price charged by the exporters ranged from Rs. 8 to Rs. 10 per square yard. The industry has now fallen into decay, the few carpets that are made being of very poor quality. A tannery in the town employs about fifty hands and sends out skins to the value of about Rs. 50,000 a year, while in a rice mill some twenty to thirty persons are engaged. The silk-weaving industry of Jaggayyapeta was once flourishing, but has fallen off in late years, trade now following the line of the Nizām's Railway. The weavers (who number about fifty families) obtain raw silk from Mysore and dye it themselves. An inferior description of cloth for women's *sāris* is largely exported to Ellore and surrounding towns

At Bezwāda the Public Works department workshops employ a daily average of about 180 hands, the maximum rising to 300. At Guntūr there are three steam cotton-presses and two hand presses, each employing from twenty five to thirty hands. A fourth steam press is about to be erected. Five cotton-ginning factories in the town employ about 150 persons, and there are seven ginning factories in other parts of the District. At Kondapalli, toys are largely manufactured from a specially light wood (*Gyrocarpus Jacquini*) found on the hills. Paper used to be made at Kondavīd, but the industry has practically died out since 1857, when the Government offices ceased to use the paper.

Kistna possesses two seaports, Masulipatam and Nizāmpatam. The latter is unimportant, and the trade of the former has declined since the opening of the railway from Hyderābād to Bombay made that

city the port for the Nizām's Dominions. The completion of through railway connexion between Madras and Calcutta was a further blow; nor has Masulipatam ever fully recovered from the effects of the great inundation of 1864. The sanctioned railway from Bezwāda to Masulipatam may revive its trade to some extent; but the port cannot be called a good one, large ships being unable to approach within five miles of the shore. In 1903-4 its exports were valued at Rs. 11,85,000 and its imports at Rs. 7,57,000. A large proportion both of the export and the import trade was with foreign countries. Of the former, goods to the value of Rs. 8,17,000 (mainly rice) were sent thither; and of the latter, merchandise valued at Rs. 5,48,000 came from that source, the largest item being European piece-goods.

Cotton is the main export from the District by rail. In 1900-1 the presses at Guntūr sent 19,000 bales (of 400 lb. each) of cotton to Cocanāda and Madras, of a value ranging from Rs. 66 to Rs. 48 per 250 lb. In the following year 29,000 bales were dispatched, but the highest price obtainable was Rs. 50 and the lowest Rs. 44½. The largest total of any year during the period 1882-1902 was that of 1899-1900, when 39,000 bales were sent out; and the smallest that of 1886-7, namely, 17,408 bales. This cotton consists of two grades, known in the market as fair red and machine-ginned red Cocanāda. It is especially suitable for manufacture into dyed fabrics, its natural colour taking the dye more easily than the white variety. In addition to its use for weaving, it finds a market for making string, &c.

In 1901 the East Coast Railway carried from Bezwāda 27,500 tons of rice, principally to Madras city and stations along the Madras and South Indian Railways. Bezwāda does a large trade in hides and skins, the sales of which amount at times to a thousand per day. Practically all of these are first roughly dressed with salt and then sent to Madras. Other exports of the District are castor-seeds, chillies, and tobacco; and among imports are jaggery (coarse sugar), refined sugar and spirits from the Sāmalkot distillery, piece-goods from Madras, and kerosene oil from the same city and from Cocanāda. The chief mercantile caste are the Komatis, but the skin trade of Bezwāda is carried on, as elsewhere, by the Labbais, a mixed race of Musalmāns.

The most important railway in the District is the East Coast line of the Madras Railway (standard gauge), which enters it from Nellore at its southern corner at Chinna Ganjām, runs through it in a north-easterly direction for 93½ miles, and then passes on into Godāvari. The section from Nellore to Kistna Canal junction was opened in 1897, that on to Bezwāda in 1898, and that from Bezwāda to Kovvūr in 1893. It crosses the Kistna river just below the anicut on a girder-bridge of twelve spans of 300 feet each. Bezwāda is also the terminus of the Nizām's Guaranteed State Railway and of the Southern Mahratta

Railway. The former line, which was opened in 1889, crosses the District frontier at Gangineni, 21½ miles from Bezwāda. It is also on the standard gauge. The section of the Southern Mahratta Railway (metre gauge) from Cumbum to Tadepalli was opened in 1889, and that from Tadepalli to Bezwāda in 1894. The length of the line within the District is 79 miles. A line is under construction from Bezwāda to Masulipatam; and other lines have been projected from Guntūr to Repalle via Tenāli, and from Phirangipuram on the Southern Mahratta Railway to Guruzāla, by way of Sattanapalle.

The length of the metalled roads is 709 miles, and of unmetalled roads 449 miles. With the exception of 22 miles of the latter, which are under the charge of the Public Works department, all are maintained by the local boards. There are avenues of trees along 694 miles. On the eastern side of the Kistna river the two chief roads are that from Masulipatam to the Hyderābād frontier via Bezwāda and Nandigāma, and that from Masulipatam to Nūzvīd via Gudivāda; and these are connected by various branches, partly metalled and partly not. On the western side of the river there are five principal lines, chief of which is the great northern road which runs from Sītānagaram to Madras via Guntūr and Chilkalūrpet. The southern portion of this part of the District, including portions of the Tenāli and Bāpatla *tāluks*, is badly in need of metalled roads, and attempts are being made to remedy this defect.

Famine.

Since the District came under British administration only one serious famine has been recorded, in 1833. This affected other areas also, but is known as the Guntūr famine in consequence of its severity in the old Guntūr District, which formerly occupied the south of Kistna District. There 150,000 persons were estimated to have died from want, and the loss of revenue was very great in 1833 and the succeeding years. In the great famine of 1876-8 Kistna suffered but little in comparison with tracts farther south. The average number of persons on relief was only about 5,000. Including remissions of revenue, the distress cost the state 7½ lakhs. Since the irrigation system from the Kistna was completed, the delta has not only been free from famine itself but has supplied other Districts with its surplus grain. In the upland tract, however, severe distress may still be caused locally by the failure of the seasonal rains. In 1900 a few relief works were opened in the Vinukonda and Narasaraopet *tāluks*, but no serious scarcity occurred.

For purposes of administration Kistna is divided into four subdivisions: namely, GUNTŪR, BEZWĀDA, NARASARAOPET, and MASULIPATAM[1].

[1] Since the limits of the District were altered (see p 319), the number of subdivisions is now five—ELLORE, BEZWĀDA, NARASAPUR, GUDIVĀDA, and MASULIPATAM—as shown in the several articles on them.

Of these, the two former, which comprise respectively the Guntūr, Bāpatla, Tenāli, and Sattanapalle *tāluks* and the Bezwāda, Nūzvīd, Nandigāma, and Tiruvūr *tāluks*, are ordinarily in the charge of Covenanted Civilians. Narasaraopet, which is made up of the Vinukonda, Narasaraopet, and Palnād *tāluks*, is under a Deputy-Collector; and the Masulipatam subdivision, which contains the head-quarters of the District and the residence of the Collector, and comprises the Bandar and Gudivāda *tāluks*, is also under a Deputy-Collector. There is a *tahsīldār* at the head-quarters of each *tāluk* with the exception of Tiruvūr, where a deputy-*tahsīldār* is posted; and, except at Tiruvūr, Vinukonda, and Nandigāma, there is a stationary sub-magistrate at each of these stations. Deputy-*tahsīldārs* are also stationed at Repalle, Ponnūru, Mangalagiri, Macherla, Kaikalūr, Avanigedda, and Jaggayyapeta. The superior staff of the District consists of the usual officers, but in addition to the District Medical and Sanitary officer (whose head-quarters are at Masulipatam) a Civil Surgeon is stationed at Guntūr.

Administration.

Civil justice is administered by seven District Munsifs, stationed at Tenāli, Guntūr, Bāpatla, Narasaraopet, Gudivāda, Masulipatam, and Bezwāda, a Sub-Judge at Masulipatam; and the District Court at the same place. The District, especially the Bezwāda subdivision, abounds in *zamīndāris*. and consequently the number of rent suits is large. House-breaking, ordinary theft, and cattle theft are the commonest offences, but Kistna is not in any way notoriously criminal. Dacoities are perhaps somewhat more numerous than in the adjoining Districts. In 1901, at Jaggarlamūdi in the Bāpatla *tāluk*, more than a lakh of rupees worth of property (chiefly cash) was stolen from the house of a Komati woman by a large gang of robbers. Crime is usually the work of the wandering gangs of criminal tribes, which consist chiefly of Kuravans and Lambādis. Latterly scarcity has prevailed for a number of years in Hyderābād, and this has had the effect of driving a number of bad characters from that State into British territory.

Our knowledge of the system of revenue administration followed by the Hindu rulers of the country before the Muhammadan conquest is very limited. Then, as now, there was a headman in each village to collect, and an accountant to record, the items of revenue, but how the assessments were calculated is obscure. Under the Muhammadans, who acquired the country in the sixteenth century, the revenues were at first for the most part collected and accounted for by Hindu officials, save in the case of the *haveli* land, or tracts in the neighbourhood of military posts intended for the maintenance of troops and Muhammadan officers. When the Muhammadan rule became lax, these Hindu officials, whose posts were usually hereditary, began

to call themselves *zamīndārs* and to act as if they were independent princes, and in the course of time they compounded the revenue demand against their respective charges for a fixed sum. The Company's officers, who found these *zamīndārs* in possession when they took over the country, fell into the mistake of regarding them as holders of feudatory estates, paying a tribute to their suzerain, and furnishing troops in times of war. They left them undisturbed, and much mismanagement and oppression resulted.

In 1802, when the permanent settlement was introduced into the District, the *peshkash* or amount to be paid by each *zamīndār* was fixed at two-thirds of half the gross profits of the land, this half being supposed to be the share paid them by the cultivators. The *haveli* land was divided into estates, which were sold and similarly brought under the permanent settlement. The Palnād *tāluk*, which, as has been mentioned above, was not acquired till later, was treated differently, the villages being rented out for terms of years until 1820, when this system gave place to a partial *ryotwāri* settlement.

The *zamīndāri* system proved an utter failure; extravagance and litigation on the part of the *zamīndārs*, and in some cases the fixing of the *peshkash* at too high a figure, led first to the Collector being compelled to assume the management of many of the estates, and then to these being sold and bought in by Government. By 1850 the greater portion of the country was no longer under *zamīndāri* tenure. In the estates in the south of the District four different revenue systems obtained: namely, (1) *ijāra*, or rent by auction; (2) *makta*, or fixed village rents; (3) the sharing system; and (4) a system partly *makta* and partly sharing. The endeavours of Government were directed towards the extension to all parts of the *makta* system, by which the village demand was fixed on a consideration of the average collections of former years, the ryots themselves arranging the proportion of the total demand that each should bear. The result, as might have been expected, was unsatisfactory and the country deteriorated. In 1857 the *ryotwāri* system, which had already been adopted in Palnād, was introduced in a partial fashion for the 'dry' lands in the southern portion of the District. Between 1866 and 1874 a systematic survey and a settlement were made, and the *ryotwāri* tenure brought into force in all Government land. The survey showed that the areas of the holdings were understated in the accounts by 7 per cent., and the settlement enhanced the revenue by 16 per cent. The settlement in the southern half of the District is now under revision. In this the 'dry' rates vary at present from 4 annas to Rs. 4-4 per acre, and the 'wet' rates from Rs. 1-12 to Rs. 7-8, a uniform water rate of Rs. 5 per acre being charged in addition. The average assessment here on 'dry' land is Rs. 2 and on 'wet' land Rs. 5 per acre. In the northern

half of the District the average assessments are respectively Rs. 1–4 and Rs. 4 per acre.

The revenue from land and the total revenue in recent years are given below, in thousands of rupees:—

	1880-1.	1890-1.	1900-1	1903-4
Land revenue . .	49,37	59,50	75,94	67,34
Total revenue . .	55,35	69,53	95,15	95,06

Owing to territorial changes, the land revenue demand is now about Rs. 65,70,000.

There are three municipalities in the District: namely, GUNTŪR and MASULIPATAM, both established in 1866, and BEZWĀDA, in 1888. Outside these towns local affairs are managed by the District board and the four *tāluk* boards of Masulipatam, Guntūr, Bezwāda, and Narasaraopet, the areas in charge of which correspond with the revenue subdivisions above mentioned. The total expenditure of these bodies in 1903–4 was Rs. 7,81,000, much of which was devoted to the maintenance and construction of roads and buildings. The chief source of income is the land cess. The local affairs of twenty-five smaller towns are managed by Unions established under Act V of 1884. Ten of these Unions are within the limits of the Guntūr subdivision, while Bezwāda contains six, Masulipatam five, and Narasaraopet four.

The District Superintendent of police has his head-quarters at Masulipatam, and an Assistant Superintendent is stationed at Guntūr. There are 84 police stations, and the number of constables is 970, working under 16 inspectors. The reserve police at Masulipatam consists of 85 constables and 9 head constables. The total strength of the force is 1,107. The number of *talaiyāris*, or rural police, is now 1,628; but it is proposed to reduce them to 1,478 at the forthcoming revision of the village establishments.

Kistna contains no District jail, convicts being sent to the Central jail at Rājahmundry; but there are twenty subsidiary jails, with accommodation for 341 prisoners.

The Census of 1901 showed that 9·2 per cent. of the males and 0·7 per cent. of the females of Kistna were able to read and write. Of the total population, 5 per cent. possessed this accomplishment, and the District takes the thirteenth place in the Presidency in the literacy of its people. Education is most widely diffused in Bandar, the head-quarters *tāluk*, and in Guntūr. The actual number of educated persons in Vinukonda and Tiruvūr is small, but in proportion to the population the proportion is not lower than in the other *tāluks*. In 1880–1 the total number of pupils under instruction in the District was 16,536; in 1890–1, 36,735; in 1900–1, 46,837, and in 1903–4, 54,181, of whom

10,346 were girls. On March 31, 1904, there were in the District 1,895 educational institutions, of which 1,628 were classed as public and 267 as private. Of the former, 1,586 were primary schools, secondary schools numbering 31, and training and other special schools 9. There was an Arts college at Masulipatam and another at Guntūr. Nineteen schools were under the control of Government, the municipalities and the local boards managing respectively 22 and 242. Aid from public funds was granted to 817 schools, while 528 were unaided but conformed to the rules of the department. Of the boys of school-going age on March 31, 1904, 22 per cent. were receiving primary instruction; and of the girls of similar age, 6 per cent. For Musalmāns alone the corresponding percentages were 42 and 12 respectively. In the same year 5,309 Panchama scholars were receiving instruction in 584 schools specially kept up for them. The total expenditure on education in the District in 1903–4 amounted to Rs. 3,36,000, of which Rs. 1,14,000 was derived from fees. Of the total, Rs. 2,07,000 was devoted to primary instruction.

Kistna possesses 14 hospitals and 8 dispensaries. With the exception of the hospitals at Bezwāda, Masulipatam, and Guntūr, and the dispensary for women and children at Masulipatam, which are municipal undertakings, all these institutions are supported from Local funds. Accommodation is provided for 148 in-patients, and in 1903 there were 1,793 such cases, the average daily number in hospital being 80. Counting both in- and out-patients, the number of persons treated was 257,494, and the number of operations performed was 6,990. The total expenditure was Rs 56,000, of which practically the whole was defrayed from Local and municipal funds.

In 1903–4 the number of persons successfully vaccinated was 23 per 1,000 of the population, the mean for the Presidency being 30. Vaccination is compulsory in the three municipalities, and has been made so in seven Unions since the beginning of 1903.

[For further particulars see the *Manual of the Kistna District*, by Gordon Mackenzie (1883).]

Kistna River (Sanskrit, *Krishna*, 'the black').—A great river of Southern India, which, like the Godavari and Cauvery, flows almost across the Peninsula from west to east. In traditional sanctity it is surpassed by both these rivers, and in actual length by the Godāvari; but the area of its drainage, including its two great tributaries, the Bhīma and Tungabhadra, is the largest of the three. Its total length is about 800 miles, and the total area of its catchment basin about 97,000 square miles.

The Kistna rises about 40 miles from the Arabian Sea (17° 59′ N. and 73° 38′ E.) in the Western Ghāts just north of the hill station of Mahābaleshwar, and flows southwards, skirting the eastern spurs of the

hills, past Karād (Sātāra District), where it receives on the right bank the Koyna from the western side of the Mahābaleshwar hills, and Sāngli, where it receives the waters of the Vārna, also from the west, until it reaches Kurundvād, when the Pānchgangā joins it, again on the right bank. The river then turns eastward and flows through Belgaum District, the States of the Southern Marāthā Agency, and Bijāpur, into the Nizām's Dominions, after a course of about 300 miles in the Bombay Presidency. In Bijāpur District it is joined on the right bank by the Ghatprabha and Malprabha from the Western Ghāts. Near the hills the channel is too rocky and the stream too swift for navigation, but its waters are largely used for irrigation in Sātāra District and in the more open country to the south-east. In Belgaum and Bijāpur its banks of black soil or laterite are 20 to 50 feet high, especially on the south side, and the stream forms many islands covered with *babūl* bushes.

On entering the Nizām's Dominions (at Echampet in Raichūr District) the Kistna drops from the table-land of the Deccan proper down to the alluvial *doābs* of Shorāpur and Raichūr. The fall is as much as 408 feet in about 3 miles. In time of flood a mighty volume of water rushes with a great roar over a succession of broken ledges of granite, dashing up a lofty column of spray. The first of the *doābs* mentioned above is formed by the confluence of the BHĪMA, which brings down the drainage of Ahmadnagar, Poona, and Sholāpur; the second by the confluence of the TUNGABHADRA, which drains the north of Mysore and the 'Ceded Districts' of Bellary and Kurnool. At the point of junction with the Tungabhadra in the eastern corner of Raichūr District, the Kistna again strikes upon British territory, and forms for a considerable distance the boundary between the eastern portion of Hyderābād and the Kurnool and Guntūr Districts of Madras. Its bed is here for many miles a deep, rocky channel, with a rapid fall, winding in a north-easterly direction through the spurs of the Nallamalai range and other smaller hills. At Wazīrābād in Nalgonda District it receives its last important tributary, the Mūsi, on whose banks stands the city of Hyderābād. The total course of the river within and along the State of Hyderābād is about 400 miles.

On reaching the chain of the Eastern Ghāts, the river turns sharply south-eastwards and flows for about 100 miles between the Kistna and Guntūr Districts (formerly the Kistna District) of Madras direct to the sea, which it enters by two principal mouths. It is in this last part of its course that the Kistna is for the first time largely utilized for irrigation. From the point where it turns southwards the rate of fall of its channel drops rapidly from an average of $3\frac{1}{2}$ feet a mile to $1\frac{1}{2}$ feet, and eventually, as it nears the sea, to as little as from 7 to 9 inches. The enormous mass of silt it carries—which has been estimated to be

sufficient in flood-time to cover daily an area of 5 square miles to a depth of 1 foot—has consequently in the course of ages been deposited in the form of a wide alluvial delta which runs far out into the sea and slopes gradually away from either bank of the river, with an average fall of 18 inches to the mile. At BEZWĀDA, at the head of this delta, the Kistna runs through a gap 1,300 yards in width in a low range of gneissic hills, and here a great masonry dam has been thrown across the river and turns its waters into a network of irrigation channels which spread throughout the delta. (*See* KISTNA CANALS.) Immediately below the dam the river is also crossed by the East Coast line of the Madras Railway on a girder-bridge of twelve spans of 300 feet. The flood velocity of the Kistna at this point is about $6\frac{1}{2}$ miles an hour, and the flood discharge has been estimated to reach the enormous figure of 761,000 cubic feet a second.

The Kistna is too rapid for navigation above the dam, but between Bezwāda and its mouth sea going native craft ply upon it for about six months in the year The main irrigation canals are also navigable, and connect Kistna District with its northern neighbour Godāvari, and, by means of the Buckingham Canal, with the country to the southwards and the city of Madras.

Kistna Canals.—The canal system of the Kistna delta depends upon the masonry dam which has been thrown across the river at the head of the delta at BEZWĀDA in Kistna District, Madras, where the stream flows through a gap 1,300 yards wide in a low range of hills. This point is about 45 miles from the sea in a direct line, and below it the river flows in a channel which is at a somewhat higher level than the surrounding country. The dam was begun in 1853, subsequent to that across the GODĀVARI, and was finished in 1854. Its length from wing to wing is 3,714 feet, or between 5 and 6 furlongs, and it rises 20 feet above the bed of the river. It is built on masonry wells, is vertical on the down-stream side and slopes gradually upwards on the other. At the top it is 6 feet wide and has a coping of cut stone. Below it is an apron of rough stone 250 feet wide, part of which is held in place by a retaining wall built right across the stream. On either flank are scouring sluices to keep free from silt the heads of the canals which take off from the dam. The system includes ten principal canals, and they and their branches lead to every part of the delta, and connect on the north with the GODĀVARI CANALS and on the south with the BUCKINGHAM CANAL. There are 372 miles of main canal, 307 of which are navigable, and 1,630 miles of smaller distributaries. In 1903–4 616,760 acres, or 964 square miles, of Government land (in addition to a large area in *zamīndāris*, for which there are no accurate statistics) were irrigated by this system. The total capital cost amounted to 149 lakhs and the net revenue was 19 lakhs, representing an interest on

the capital of nearly 13 per cent. Full particulars will be found in Mr. G. T. Walch's *Engineering Works of the Kistna Delta* (Madras, 1899).

Kittūr.—Village and fort in the Sampgaon *tāluka* of Belgaum District, Bombay, situated in 15° 36′ N. and 74° 48′ E., 26 miles south-east of Belgaum town. Population (1901), 4,922. A stone in a temple at this place preserves an interesting record of a trial by ordeal in 1188. The Desais of Kittūr were descended from two brothers who acted as bankers with the Bijāpur army towards the close of the sixteenth century. For their services they obtained a grant of Hubli, and their fifth successor established himself at Kittūr. On the fall of the Peshwā, the place passed into the hands of the British. But in 1818, when General Munro was besieging the fort of Belgaum, the Desai of Kittūr gave great assistance, and in return was allowed to retain possession of the village. The Desai died in 1824 without issue. An attempt was subsequently made to prepare a forged deed of adoption, which led to an outbreak, in which the Political Agent and Collector, Mr. Thackeray, was killed and his two Assistants imprisoned. The prisoners were afterwards released, but the fort was not surrendered until it had been attacked and breached, with a loss of 3 killed and 25 wounded. Among the killed was Mr. Munro, Sub-Collector of Sholāpur, and a nephew of Sir Thomas Munro. Kittūr then finally passed into the hands of the British, although another rising occurred in 1829, which was not suppressed without difficulty. Bi-weekly markets are held here, at which cotton, cloth, and grain are sold. Weaving and glass bangle making are the sole industries. The fort is still standing, though in a ruined condition. Kittūr contains 3 boys' schools with 222 pupils and 2 girls' schools with 104.

Kiūnthal.—One of the Simla Hill States, Punjab. *See* KEONTHAL.

Klangdong.—Upper reaches of the DHALESWARI river, in Assam.

Koch.—Tribe in Cooch Behār State, Bengal. *See* COOCH BEHĀR.

Kod.—Southernmost *tāluka* of Dhārwār District, Bombay, lying between 14° 17′ and 14° 43′ N. and 75° 10′ and 75° 38′ E., with an area of 400 square miles. There are 176 villages, but no town. The population in 1901 was 96,245, compared with 84,427 in 1891. The density, 241 persons per square mile, is almost equal to the District average. The demand for land revenue in 1903-4 was 2·03 lakhs, and for cesses Rs. 15,000. The head-quarters are at Hirekerur. The *tāluka* is dotted with small hills and ponds. A considerable portion is well watered, and covered with sugar-cane fields and areca palms. The soil is chiefly red, black soil occurring in a few villages in the east. The north and west are studded with small hills and knolls, and the south is also hilly. The Tungabhadra touches a few villages in the south-east corner; the Kumadvati, rising in Mysore, flows east across the *tāluka*. Kod is cool

and healthy in the hot months, but very malarious during the cold season. The Madag tank, fed by the waters of the Kumadvati river, once a work of first-class importance but now fallen into disrepair, irrigates 922 acres.

Kodachādri.—Mountain in the Nagar *tāluk* of Shimoga District, Mysore, situated in 13° 51′ N. and 74° 52′ E., 4,411 feet high. It rises more than 2,000 feet above the villages below, and is clothed with splendid forests. The top of the hill is a narrow ridge, only 12 feet across in many places, and with a precipice on either side. On the west the hill descends almost perpendicularly for 4,000 feet, with the Kanara forests spread out below. The sea appears quite close, and the bay and town of Coondapoor lie opposite. On the hill is a temple to the Huli Deva or 'tiger-god,' whose image is provided with thirty-two arms.

Kodagu.—Vernacular name of COORG.

Kodaikānal Tāluk.—Minor *tāluk* in the Dindigul subdivision of Madura District, Madras. Its limits correspond roughly with the PALNI HILLS, but their exact area has not been ascertained. The head-quarters are the hill station of KODAIKĀNAL (population, 1,912), and the *tāluk* contains, in addition, 15 small hill villages. The population in 1901 was 19,677, compared with 18,380 in 1891. The demand for land revenue and cesses in 1903–4 amounted to Rs. 42,000. Cultivation is carried on along the sides of the valleys, and in some places presents a most picturesque appearance, owing to the numerous terraces which have been formed down the slopes of the hills, either to obtain sufficiently level ground or to render the hill torrents available for irrigation. Among special products may be mentioned wheat, garlic, coffee, and cardamoms. The rice produced is of a coarse quality and takes between eight and ten months to ripen. Plantains are largely cultivated in the villages among the lower Palnis, and numerous herds of cattle are tended by the villagers of the upper part of the range. Education is backward among the people, and is promoted almost entirely by the Jesuit and American Missions. The sanitation of the villages is more than usually defective.

Kodaikānal Town ('Forest of creepers').—Head-quarters of the *tāluk* of the same name in Madura District, Madras, situated in 10° 14′ N. and 77° 29′ E., on the Palni Hills. Formerly an insignificant hamlet of Vilpatti village, it is now one of the largest sanitaria in the Presidency. The population according to the Census of 1901 was only 1,912; but this enumeration was made in the cold season, before the influx of the numerous hot-season visitors and their following had begun. Kodaikānal was constituted a municipality in 1899. The municipal receipts and expenditure in 1903–4 were Rs. 10,700 and Rs. 9,900 respectively, most of the former being derived from the taxes on land and houses. A scheme for supplying the place with water, at

a cost of Rs. 63,000, is under consideration. The station contains three churches, a school for European boys and girls managed by the American Mission, and a municipal hospital.

The sanitarium stands about 7,000 feet above sea-level. The houses of the European residents are picturesquely grouped about a natural theatre of hills surrounding an artificial lake which has been constructed at the bottom of a beautiful little valley, or on the cliff which overhangs the *ghāt* road leading up from the low country from Periyakulam. The temperature of the station is similar to that of Ootacamund, but somewhat milder; and, as the rainfall is lighter and the atmospheric conditions more equable than those of the Nīlgiris, the climate of the place may be said to be one of the best in India Round about Kodaikānal are grassy rolling downs, with beautiful little woods nestling in their hollows and perennial streams flowing through them, very similar to, though somewhat steeper than, those about Ootacamund. The place is thus capable of considerable extension, and its development is at present mainly retarded by the lack of easy means of communication with the low country and the railway. The journey from the nearest railway station, Ammayanāyakkanūr on the South Indian line, to the foot of the hill where the bridle-path up the *ghāt* begins, a distance of 33 miles, is made in bullock-carts. The bridle-path makes an ascent of about 6,000 feet in 11 miles, and is quite impracticable for any wheeled vehicles. Visitors have either to ride or be carried up in chairs. The want of a cart-road also occasions difficulties in bringing up articles from the low country. A driving road through the lower Palnis and a light railway through the Periyakulam valley have been suggested as means of improving these communications, and a trace for a *ghāt* road from the Palni side has been made out. Want of funds has prevented its execution.

Near the station is the Kodaikānal Observatory, which is placed 7,700 feet above sea-level. Under the scheme for the reorganization of Indian observatories which came into operation in 1889, the chief part of the Madras Observatory was transferred to Kodaikānal, the place being preferred to Ootacamund on account of its greater freedom from mist and cloud, and the former Government Astronomer became Director of the Kodaikānal and Madras Observatories. The appliances and powers of this observatory are now directed to the prosecution of inquiry in the sciences of terrestrial magnetism, meteorology, and seismology, and to astronomical observations for the purpose of time-keeping, but chiefly to the important subject of solar physics.

About 1,000 feet below Kodaikānal, at Shembaganūr, is a Jesuit college containing 65 students, who undergo a course of training for seven years in preparation for the priesthood.

Kodangal Tāluk.—Eastern *tāluk* of Gulbarga District, Hyderābād

State, with an area of 211 square miles and population in 1901 of 62,091, including *jāgirs*, compared with 67,983 in 1891. It had three towns, KODANGAL (population, 5,099), the head-quarters, TĀNDŪR (5,930), and KOSGI (8,228); and 95 villages, of which 35 are *jāgīr*. The land revenue in 1901 was 1·1 lakhs. In 1905 the *tāluk* was enlarged by the addition of 59 villages from Gurmatkāl and 15 from Koilkonda in Mahbūbnagar, while it lost 21 villages to Chincholi. Rice is grown largely by tank-irrigation. The two *jāgīr tāluks*, Tāndūr and Kosgi, with 62 and 11 villages, and 23,725 and 15,344 inhabitants respectively, lie to the north and south-east. Tāndūr and Kosgi are their head-quarter towns, while their areas are 202 and 25 square miles respectively.

Kodangal Town.—Head-quarters of the *tāluk* of the same name in Gulbarga District, Hyderābād State, situated in 17° 7′ N. and 77° 38′ E., 12 miles south of Tāndūr station on the Nizām's State Railway. Population (1901), 5,099. Besides the *tahsīl* office, the office of the police inspector, a *tāluk* post office, and a vernacular upper primary school with 232 pupils are located here. Kodangal has a mosque said to be 300 years old.

Kodangibetta ('Elk hill').—Peak in the east of the Yedenālknād *tāluk* of Coorg, Southern India, situated in 12° 16′ N. and 75° 58′ E.

Kodaung.—A hilly tract in the north-east of the Möngmit State, at present administered by a civil officer under the control of the Deputy-Commissioner as a township of the Ruby Mines District, Upper Burma. It lies between 23° 5′ and 23° 49′ N. and 96° 49′ and 97° 38′ E., with an area of 760 square miles. It is a mass of hills rising in places to a height of 7,000 feet above the sea; but though the country is rugged, communications are fairly good, for there are usually mule-tracks connecting the villages. At one time Kodaung was entirely populated by Palaungs; but the Kachins began to oust these hill people about a hundred years ago, and of the total population (22,127) in 1901 half were Kachins and half Palaungs. There are 303 villages, the head-quarters being at Molo, on the Shweli. The law in force is that of the Kachin Hill Tribes Regulation, 1895.

Kodinār.—Head-quarters of the *tāluka* of the same name, Amreli *prānt*, Baroda State, situated in 20° 47′ N. and 70° 42′ E. Population (1901), 6,664. It is a walled town, pleasantly situated on the south bank of the Singavada river, about 3 miles from the sea. It is administered by a municipality, which receives an annual grant from the State of Rs. 1,400; and it possesses Munsif's and magistrate's courts, a dispensary, a vernacular school, and public offices. Trade is carried on by sea with Bombay, Karāchi, Porbandar, and Mangrol, the principal exports being cotton, grain, and *ghī*. The imports are wheat, *jowār*, clothes, spices, and dry goods.

Kohāt District.—Central District of the North-West Frontier Province, lying between 32° 48′ and 33° 45′ N. and 70° 30′ and 72° 1′ E., with an area of 2,973 square miles. The District has the shape of an irregular rhomboid, with one arm stretching north-east towards the Khwarra-Zira forest in Peshāwar District. It is bounded on the north by Peshāwar District, and by the hills inhabited by the Jowāki and Pass Afrīdis; on the north-west by Orakzai Tīrāh; on the south-west by Kābul Khel territory (Wazīristān); on the south-east by Bannu and the Miānwālī District of the Punjab; and on the east by the Indus. Its greatest length is 104 miles, and its greatest width 50 miles.

Physical aspects.

The District consists of a succession of ranges of broken hills, whose general trend is east and west, and between which lie open valleys, seldom more than 4 or 5 miles in width. These ranges are of no great height, though several peaks attain an altitude of 4,700 or 4,900 feet. As the District is generally elevated, Hangu to the northward being 2,800 feet and Kohāt, its head-quarters, 1,700 feet above sea-level, the ranges rise to only inconsiderable heights above the plain. The general slope is to the east, towards the Indus, but on the south-west the fall is towards the west into the Kurram river. The principal streams are the Kohāt and Teri Tois ('streams'), both tributaries of the Indus, and the Shkalai which flows into the Kurram. The Kohāt Toi rises in the Māmozai hills. It has but a small perennial flow, which disappears before it reaches the town of Kohāt, but the stream reappears some miles lower down and thence flows continuously to the Indus. The Teri Toi has little or no perennial flow, and the Shkalai is also small, though perennial. The most fertile part is the Hangu *tahsīl*, which comprises the valley of Lower and Upper Mīrānzai. The rest of the District consists of ranges of hills much broken into spurs, ravines, and valleys, which are sometimes cultivated, but more often bare and sandy.

The rocks of the District belong chiefly to the Tertiary system, and consist of a series of Upper and Middle Tertiary sandstones with inliers of Nummulitic limestone. The limestones occur chiefly in the north, while sandstone is more prominent to the south. Below the Nummulitic beds is found the most important mineral of the District, namely, salt. It occurs, with bands of gypsum and red clay, below the eocene rocks at various localities, but is found in greatest quantity at Bahādur Khel, where rock-salt is seen for a distance of about 8 miles and the thickness exposed exceeds 1,000 feet. The salt is very pure, and differs remarkably in colour from that of the SALT RANGE, being usually grey, while that of the latter area is red or pink. There is no definite evidence as to its age, which is usually regarded as Lower Tertiary, but the underlying rocks are not exposed, and it has been

classed with the overlying eocene on account of the apparent absence of any unconformity[1].

The vegetation is composed chiefly of scrub jungle, with a secondary element of trees and shrubs. The more common plants are: *Flacourtia sapida*, *F. sepiaria*, several species of *Grewia*, *Zizyphus nummularia*, *Acacia Jacquemontii*, *A. leucophloea*, *Alhagi camelorum*, *Crotalaria Burhia*, *Prosopis spicigera*, several species of *Tamarix*, *Nerium odorum*, *Rhazya stricta*, *Calotropis procera*, *Periploca aphylla*, *Tecoma undulata*, *Lycium europaeum*, *Withania coagulans*, *W. somnifera*, *Nannorhops Ritchieana*, *Fagonia*, *Tribulus*, *Peganum Harmala*, *Calligonum polygonoides*, *Polygonum aviculare*, *P. plebejum*, *Rumex vesicarius*, *Chrozophora plicata*, and species of *Aristida*, *Anthistiria*, *Cenchrus*, and *Pennisetum*.

Game of all kinds is scarce; leopards are occasionally shot in the hills, and twenty years ago were quite common. There are practically no deer. Bears occasionally come down from the Sāmāna range to Mīrānzai when the corn is ripe. *Chikor* and partridges abound in Mīrānzai and the Teri *tahsīl*, and fish are abundant in the Kurram and the Indus.

The District as a whole lies high; and the hot season, though oppressive, is short, and the spring and autumn months are pleasant. The winter is very cold, and a cutting west wind, known as the 'Hangu breeze,' blows down the Mīrānzai valley to Kohāt for weeks together. Owing to the great extremes of heat and cold pneumonia is common, but malarial fever is the chief cause of mortality.

The monsoon rains do not usually penetrate as far as Kohāt, and the rainfall is very capricious. The annual fall at Kohāt averages 18 inches, while the greatest fall since 1882 was 48 inches at Fort Lockhart on the Sāmāna in 1900–1, and the least 5 inches at Kohāt in 1891–2. The distribution of the rain is equally uncertain, villages within the distance of a few miles suffering, some from drought and some from floods, at the same time.

History.

The first historical mention of the District occurs in the memoirs of the emperor Bābar. The District was then, as now, divided between the Bangash and Khattak branches of the Pathān race, the Bangash occupying the Mīrānzai valley, with the western portion of Kohāt proper, while the Khattaks held the remainder of the eastern territory up to the bank of the Indus. According to tradition the Bangash were driven from Gardez in the Ghilzai country, and settled in the Kurram valley about the fourteenth century. Thence they spread eastward, over the Mīrānzai and Kohāt region, fighting for the ground inch by inch with the Orakzai, whom they

[1] Wynne, 'Trans-Indus Salt Region in the Kohāt District,' *Memoirs, Geological Survey of India*, vol. xi, part ii.

cooped up at last in the frontier hills. The Khattaks are said to have left their native home in the Sulaimān mountains about the thirteenth century and settled in Bannu. Owing to a quarrel with the ancestors of the Bannūchis, they migrated northward two hundred years later and occupied their present domains.

Bābar made a raid through the District in 1505, being attracted by a false hope of plunder, and sacked Kohāt and Hangu. The Mughal emperors were unable to maintain more than a nominal control over the tract. One of the Khattak chiefs, Malik Akor, agreed with Akbar to protect the country south of the Kābul river from depredations, and received in return a grant of territory with the right of levying tolls at the Akora ferry. He was thus enabled to assume the chieftainship of his tribe, and to hand down his authority to his descendants, who ruled at Akora, among them being the warrior poet Khushhāl Khān.

Kohāt became part of the Durrāni empire in 1747, but authority was exercised only through the Bangash and Khattak chiefs. Early in the nineteenth century, Kohāt and Hangu formed a governorship under Sardār Samad Khān, one of the Bārakzai brotherhood, whose leader, Dost Muhammad, usurped the throne of Afghānistān. The sons of Sardār Samad Khān were driven out about 1828 by the Peshāwar Sardārs, the principal of whom was Sultān Muhammad Khān. In the Teri *tahsīl*, shortly after the establishment of the power of Ahmad Shāh Durrāni, it became the custom for a junior member of the Akora family to rule as sub-chief at Teri. This office gradually became hereditary, and sub chiefs ruled the western Khattaks in complete independence of Akora. The history of affairs becomes very confused: the Akora chiefs were constantly interfering in Teri affairs; there were generally two or more rival claimants; the chiefship was constantly changing hands, and assassinations and rebellion were matters of every-day occurrence.

The Sikhs, on occupying the country, found themselves unable to levy revenue from the mountaineers. Ranjit Singh placed Sultān Muhammad Khān in a position of importance at Peshāwar, and made him a grant of Kohāt, Hangu, and Teri. One Rasūl Khān became chief of Teri, and on his death in 1843 was succeeded by his adopted son, Khwāja Muhammad Khān. Meanwhile, Sultān Muhammad Khān continued to govern the rest of the District through his sons, though the country was generally in a disturbed state, and the upper Mīrānzai villages were practically independent. When the Sikh troops took up arms at Peshāwar on the outbreak of the second Sikh War, George Lawrence, the British officer there, took refuge at Kohāt; but Sultān Muhammad Khān played him false, and delivered him over as a prisoner to the Sikhs. At the close of the campaign, Sultān Muhammad Khān and his adherents retired to Kābul, and the District with

the rest of the Punjab was annexed to the British dominions. Khwāja Muhammad Khān had taken the British side and continued to manage the *tahsīl*, which was made a perpetual *jāgīr*. In 1872 Khwāja Muhammad obtained the title of Nawāb and was made a K.C.S.I. He died in 1889 and was succeeded by his son, Khān Bahādur Abdul Ghafūr Khān.

At annexation the western boundary was left undefined; but in August, 1851, Upper Mīrānzai was formally annexed by proclamation, and an expedition was immediately dispatched up the valley to establish our rule. There was no fighting, beyond a little skirmishing with the Wazīrs near Biland Khel. The lawless Mīrānzai tribes, however, had no desire to be under either British or Afghān rule. They were most insubordinate, paid no revenue and obeyed no orders, while incursions from across the frontier continued to disturb the peace of the new District. At last, in 1855, a force of 4,000 men marched into the valley, enforced the revenue settlement, and punished a recusant village at the foot of the Zaimukht hills. The people of Mīrānzai quickly reconciled themselves to British rule; and during the Mutiny of 1857 no disturbance of any sort took place in the valley, or in any other part of the District. In March, 1858, it was finally decided that the Kurram river was to form the western boundary of the District, thus excluding the Biland Khel on the opposite bank.

The construction of the road from Kohāt to Peshāwar was undertaken immediately after annexation, and at once brought the British into conflict with the border tribes, while the construction of the road to Bannu by Bahādur Khel was also the occasion of outbreaks in which the salt mines were seized by the insurgents.

Population.

Kohāt District contains one town and 298 villages. The population at the last three enumerations was: (1881) 174,762, (1891) 195,148, and (1901) 217,865. It increased by 11·5 per cent. during the last decade, the increase being greatest in the Kohāt *tahsīl* and least in Teri. The increase, though partly due to the presence of coolies, &c., employed in making the Khushālgarh-Kohāt Railway, was mainly the result of increased tranquillity on the border. The District is divided into three *tahsīls*, the chief statistics of which, in 1901, are shown in the table on the next page.

The head-quarters of these are at the places from which each is named. The only town is KOHĀT, the administrative head-quarters of the District. The District also contains the military outposts of THAL and FORT LOCKHART. The density of the population is low, and the population is too small in some villages to cultivate all the land. Muhammadans number 199,722, or more than 91 per cent. of the total; Hindus, 14,480; and Sikhs, 3,344. The language commonly spoken is Pashtū; the Awāns and Hindus talk Hindki, a dialect of Punjābi, among themselves, but know Pashtū as well.

Tahsil.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Kohāt	811	1	89	79,601	114	+ 13·7	5,243
Teri	1,616	...	166	94,363	62	+ 10·4	2,221
Hangu	546	...	43	43,901	87	+ 10·6	1,629
District total	2,973	1	298	217,865	80	+ 11·5	9,093

The most numerous tribe in the District are the Pathāns, who number 134,000, or 61 per cent. of the total population. They are divided into two main branches: the Bangash, who occupy the Mirānzai valley with the western portion of the Kohāt *tahsīl*; and the Khattaks, who hold the eastern part of Kohāt and the Teri *tahsīl* up to the Indus. The Khattaks are inferior as cultivators but make better soldiers than the Bangash. Next in importance to the Pathāns come the Awāns (22,000), who live along the banks of the Indus and are probably immigrants from Rāwalpindi District. Saiyids number 8,000. Of the commercial and money-lending classes, the Aroras (8,000) are the most important, the Khattrīs numbering only 3,000, and Parāchas (carriers and pedlars) 2,000. The Shaikhs, who mostly live by trade, number 3,000. Of the artisan classes, the Tarkhāns (carpenters, 4,000), Lohars (blacksmiths, 4,000), and Mochis (shoemakers and leather-workers), Kumhārs (potters), and Julāhās (weavers), each returning 2,000, are the most important; and of the menials, only the Nais (barbers, 3,000) and Chūhrās or Kutānas (sweepers, 2,000) appear in any numerical strength. In 1901 the District contained 145 native Christians, but no mission has been established. Agriculture supports 68 per cent. of the population.

Agriculture.

In the low-lying tracts along the bottom of the main valleys the soil is generally a good loam, fertile and easily worked. The silt brought down by the mountain torrents is poor and thin, but the land is as a rule well manured. In the western portion of the Hangu *tahsīl* there are stretches of a rich dark loam, which yields good autumn crops in years of seasonable summer rains. But the predominant soil in the District is clay, varying from a soft and easily ploughed soil to a hard one, which is useless without a great deal of water. The clay is often brick-red in colour, and this, too, is found both soft and hard. The soft red clay is an excellent soil, holding water well, and needing no manure if cropped only once a year. Towards the Indus the level land, which alone can be cultivated, has a thin sandy soil covered in many places almost entirely with stones; these help to keep the soil

cool, and without them crops could not live on the thin surface soil. Agricultural conditions, however, depend chiefly on the presence or absence of water. The spring crop, which in 1903-4 occupied 58 per cent. of the area harvested, is sown from October to January; the autumn crop mainly in June, July, and August, though cotton and great millet are often sown in May.

The following table shows the main statistics of cultivation according to the revenue returns for 1903-4, the areas being in square miles:—

Tahsīl.	Total.	Cultivated.	Irrigated.	Cultivable waste.	Not available for cultivation.
Kohāt	811	107	43	186	518
Teri	1,616	300	3	182	1,134
Hangu	546	54	15	54	438
Total	2,973	461	61	422	2,090

The chief food-crops are wheat, covering 173 square miles, or 44 per cent. of the cultivated area, and *bājra*, 102 square miles, or 26 per cent Smaller areas are occupied by gram (30), maize (24), barley, pulses, and *jowār*. Very little rice or cotton is produced.

The cultivated area has apparently decreased by 3 per cent. since the previous settlement, as the lightness of the revenue demand afforded no inducement for keeping the poorer soils under the plough, and no improvements have been made in agricultural methods. There is, however, room for expansion of cultivation, especially in Mīrānzai. Advances for the repair of embankments and watercourses are in some demand, and Rs. 36,100 was lent during the five years ending 1903-4 under the Land Improvement Loans Act. During the same period Rs. 31,500 was advanced under the Agriculturists' Loans Act for the purchase of seed and bullocks.

The cattle bred locally are of poor quality, and animals are largely imported from the Punjab. Camels are bred in large numbers. Both the fat-tailed and ordinary breeds of sheep are found, and large flocks of goats are kept. The local breed of horses is fair. Two pony and two donkey stallions are maintained by the municipality and the District board.

Out of the total cultivated area of 461 square miles, only 61 square miles, or 12 per cent., were irrigated in 1903-4. Of this area, 3·4 square miles were supplied by wells and 53·8 square miles by streams and tanks, in addition to which 4 square miles are subject to inundation from the Indus. There were 413 masonry wells worked by bullocks with Persian wheels, and 175 unbricked wells and water-lifts. The most effective irrigation is from perennial streams; but agriculture,

especially in Mīrānzai, is much benefited by the building of tanks and embankments to hold up rain-water.

The District contains 74 square miles of unclassed forest and Government waste under the management of the Deputy-Commissioner. Parts of the hill tracts are covered with dwarf-palm (*mazri*). The District as a whole is not well wooded, though where water is obtainable roadside avenues have been planted, in which the mulberry, Persian lilac (*bakain*), willow, and *shīsham* are preponderant. Elsewhere the *palosi* (*Acacia modesta*) and other species of acacia, and the wild olive, are the commonest trees. The summit of the Sāmāna has been almost denuded of trees, but in sheltered places ilex, walnut, and Scotch fir are found.

The salt-producing areas, from which salt has been excavated from time immemorial, occupy a tract about 50 miles long with a nearly uniform width of 20 miles. The KOHĀT SALT QUARRIES at present worked are at Jatta, Mālgīn, Kharak, and Bahādur Khel, of which the last presents perhaps the greatest amount of exposed rock-salt to be seen in the world. The average sales of salt for the three years ending 1903–4 exceeded 15,307 tons. The District contains three petroleum springs, which would yield perhaps half a gallon a day if the oil was gathered daily, but it is only occasionally taken. Sulphur is found in the hills to the south of the Kohāt Toi, and limestone and sandstone all over the District, but they are not regularly quarried.

Trade and communications.

The District possesses very few handicrafts and no manufactures. Kohāt used to be celebrated for its rifles, in which a high degree of excellence was attained, considering the rude nature of the appliances; but the industry not being encouraged has now departed to the independent villages of the Kohāt pass, where it flourishes. Coarse cotton cloth is made throughout the District, but not in sufficient quantities to supply even the local demand. Turbans of excellent texture and colour are woven of both silk and cotton at Kohāt and the adjoining villages, and coloured felt mats are made; woollen camel-bags and leathern sandals are also produced. The dwarf-palm is used to a very large extent for the manufacture of sandals, ropes, mats, matting, and baskets.

A large and increasing trade with Tīrāh and Kābul passes through the District by the Khushālgarh-Kohāt-Thal Railway, but the imports and exports apart from this through traffic are not large. Salt, agricultural produce, and articles made of the dwarf-palm, which grows plentifully throughout the District, are the principal exports; and piece-goods and iron are the principal imports. Kohāt, Thal, and Naryāb are the chief trade centres.

The District is traversed by the 2 feet 6 inches gauge railway from Khushālgarh to Thal, opened in 1903. The line at once came into

universal use for the conveyance of passengers and goods, and has proved an unexpected commercial success. It is being converted to the broad gauge, which will be opened on the completion of the bridge over the Indus at Khushālgarh. Mails and passengers are conveyed by tonga from Peshāwar to Kohāt over the Kohāt pass and on to Bannu. There are 179 miles of Imperial metalled roads, and 509 miles of unmetalled roads. Of the latter, 131 miles are Imperial, and 378 belong to the District board. Besides the Peshāwar-Kohāt-Bannu road, the most important routes are those from Khushālgarh through Kohāt to the Kurram at Thal and from Khushālgarh to Attock. There is little traffic on the Indus, which has a very swift current in this District; it is crossed by a bridge of boats at Khushālgarh, now being replaced by a bridge which both road and rail will cross.

Famine.

The District was classed by the Irrigation Commission as one of those secure from famine. The crops that matured in the famine year of 1899–1900 amounted to as much as 77 per cent. of the normal out-turn.

Administration.

The District is divided for administrative purposes into three *tahsīls*, each under a *tahsīldār* and *naib-tahsīldār*. The Deputy-Commissioner has political control over the trans-border tribes in adjoining territory: namely, the Jowaki and Pass Afrīdis, the Sepaiah Afrīdis (Sipāhs), the Orakzai Zaimukhts, the Biland Khel and Kābul Khel Wazīrs. Under him are two Assistant Commissioners, one of whom is in charge of the Thal subdivision and exercises political control, supervised by the Deputy-Commissioner, over the tribes whose territories lie west of Fort Lockhart on the Sāmāna range. Two Extra-Assistant Commissioners, one of whom is in charge of the District treasury, complete the District staff. One member of the staff is sometimes invested with the powers of an Additional District Magistrate.

The Deputy-Commissioner as District Magistrate is responsible for criminal justice, and in his capacity of District Judge has charge of the civil judicial work. He is supervised by the Divisional Judge of the Derajāt Civil Division, and has under him a Subordinate Judge, whose appellate powers relieve him of most of the civil work, a Munsif at head-quarters, and an honorary civil judge at Teri. Crime is still very frequent and serious offences preponderate; but the advance in law and order during late years, especially since the Mīrānzai expedition of 1891, has been considerable.

The early history of Kohāt, fiscal as well as political, is vague and uncertain. Under the Mughals and Afghāns leases were granted in favour of the Khāns, but few records remain to show even the nominal revenue. In 1700 the emperor Aurangzeb leased Upper and Lower Mīrānzai to the Khān of Hangu for Rs. 12,000. In 1810 the Kohāt

tahsīl was leased for Rs. 33,000. In 1836 Ranjīt Singh assigned the revenue of the whole of the present District to Sultān Muhammad Khān, Bārakzai, in return for service. This revenue was estimated at 1½ lakhs.

After annexation four summary settlements were made of the Kohāt and Hangu *tahsīls*, which reduced the demand from one lakh to Rs. 75,000. In 1874 a regular settlement of the Kohāt and Hangu *tahsīls* was begun, excluding three *tappas* which were settled summarily. The rates fixed per acre varied from Rs. 6-8 on the best irrigated land to 3 annas on the worst 'dry' land; and the total assessment was Rs. 1,08,000 gross, an increase of 18 per cent. on the previous demand. So large a sum was granted in frontier remissions and other assignments that the net result to Government was a loss of Rs. 5,000 in land revenue realizations. The object of the settlement, however, was not so much to increase the Government demand as to give the people a fair record-of-rights. The increasing peace and security along this part of the border, culminating in the complete tranquillity which has characterized it since 1898, has worked an agricultural revolution in Upper Mīrānzai.

The Teri *tahsīl*, which forms half the District, has a distinct fiscal history. The Khān of Teri has always paid a quit rent, which was Rs. 40,000 under the Bārakzai rulers, and was fixed at Rs. 31,000 on annexation. Since then it has been gradually lowered to Rs. 20,000, at which it now stands. During the Afghān War the Khān's loyalty to the British exceeded that of his people, who resented the forced labour then imposed upon them by the Khān. Consequently at the close of the war a veiled rebellion broke out in Teri. It was therefore decided that the tract should be settled, and a settlement was carried out in 1891-4, the chief object being to place on a satisfactory footing the relations between the Khān and the revenue-payers.

In 1900 the first regular settlement of Upper Mīrānzai and the revision of settlement in the rest of the District was begun. This was completed in 1905 and resulted in a net increase of Rs. 59,000 in the revenue demand, which amounted to Rs. 1,28,000. The rates of the new settlement per acre are: 'dry' land, maximum Rs. 1-12, minimum 3 annas; and 'wet' land, maximum Rs. 7-12, minimum R. 1.

The total collections of revenue and of land revenue alone have been as follows, in thousands of rupees:—

	1880-1.	1890-1.	1900 1.	1903-4.
Land revenue . .	90	79	85	74
Total revenue . .	93	90	94	83

The District contains only one municipality, KOHĀT TOWN. Outside

this town, local affairs are managed by a District board, whose income is mainly derived from cesses. In 1903–4 the income amounted to Rs. 14,100, and the expenditure to Rs. 16,300, education forming the largest individual charge.

The regular police force consists of 527 of all ranks, of whom 44 are municipal police. The village watchmen number 265. There are 12 police stations, 16 road-posts, and 4 out-posts. The border military police, who are amalgamated with the local militia (the Sāmāna Rifles), are under a commandant, assisted by a British adjutant and quartermaster, all of whom are officers of the regular police force. The control of the commandant is exercised subject to the orders of the Deputy-Commissioner. The force, which numbers 1,023 of all ranks, garrisons 23 posts for maintaining watch and ward on the border. The District jail at head-quarters can accommodate nearly 300 prisoners.

Only 4·2 per cent. of the population (7·2 males and 0·3 females) could read and write in 1901. The proportion is markedly higher amongst Sikhs (39·1 per cent.), and Hindus (29·5), than among the agricultural Muhammadans (1·6 per cent.). Owing to the difficulties of communication and the poverty of the District board, education continues to be very backward, and the percentage of literacy compares unfavourably with that of the Province generally. The number of pupils under instruction was 375 in 1880–1, 536 in 1890–1, 908 in 1900–1, and 1,260 in 1903–4. In the last year there were 2 secondary and 28 primary (public) schools, and 55 elementary (private) schools, the number of girls being 90 in the public and 230 in the private schools. The total expenditure was Rs. 16,000, of which fees brought in Rs. 2,400, the District fund contributed Rs. 5,000, the municipality Rs. 6,800, and Imperial revenues Rs. 2,600.

Besides the civil hospital at Kohāt, and a branch in the town for females, the District possesses two dispensaries, at Hangu and Teri. The hospitals and dispensaries contain 57 beds. In 1904 the number of cases treated was 53,499, including 1,106 in-patients, and 2,100 operations were performed. The income was Rs. 10,800, Government contributing Rs. 3,800 and municipal and District funds Rs. 7,000.

The number of successful vaccinations in 1903-4 was 951, representing 44 per 1,000 of the population. The Vaccination Act has been in force in Kohāt since 1903.

[*District Gazetteer*, 1879 (under revision).]

Kohāt Tahsīl.—*Tahsīl* of Kohāt District, North-West Frontier Province, lying in two portions between 33° 22′ and 33° 45′ N. and 71° 5′ and 71° 40′ E., and between 33° 3′ and 33° 20′ N. and 71° 27′ and 71° 46′ E., with a total area of 811 square miles. The *tahsīl* is divided into two parts, separated by an extension of the Teri *tahsīl*

reaching to the foot of the Afrīdi hills, by which the District is bounded on the north. The western portion, which contains the town and cantonment of Kohāt, consists of the valley of the Kohāt Toi, after its issue from Lower Mīrānzai and the adjacent hills. The other part is a strip of barren and fairly level country along the right bank of the Indus north of Khushālgarh. The population in 1901 was 79,601, compared with 69,984 in 1891. It contains the town of KOHĀT (30,762), the District and *tahsīl* head-quarters; and 89 villages. The land revenue and cesses in 1903–4 amounted to Rs. 90,000.

Kohāt Salt Quarries.—The Kohāt District of the North-West Frontier Province possesses important salt quarries at Jatta (or Jatta Ismail Khel), Mālgīn, Kharak, and Bahādur Khel, lying in the east and centre of the District. Bahādur Khel, on the Bannu border, contains about forty quarries and Jatta sixteen. At the former place a mass of rock-salt crops out between two hills, 8 miles long by ¼ mile broad, the quarries worked lying in a small part of this area. Kohāt salt is grey to black in colour, and less esteemed than that of the Salt Range, though analysis shows it to be of good quality. It is purchased by traders direct from the miners under the supervision of the preventive establishment, which consists of two superintendents at Bahādur Khel and Jatta, an assistant superintendent at Mālgīn, 5 inspectors, and 334 subordinates. Numerous outcrops have to be watched. The quantity excavated in 1903–4 was 16,493 tons, paying a duty of Rs. 6,73,961. The gross income during the six years ending 1902–3 averaged Rs. 6,63,825. The salt is largely exported beyond the border and to Afghānistān, but it also supplies the four Districts of the Province which lie west of the Indus. The export trade is chiefly in the hands of Ghilzai, Mohmand, Afrīdi, and other trans-border traders.

Kohāt Town.—Head-quarters of the District and *tahsīl* of the same name, North-West Frontier Province, situated in 33° 35′ N. and 71° 26′ E., on the Khushālgarh-Thal branch of the North-Western Railway, 30 miles from Khushālgarh. Population (1901), 30,762, of whom 19,807 are Muhammadans, 7,833 Hindus, and 2,832 Sikhs. The population in the cantonment, included in the above total, was 12,670. The present town of Kohāt has sprung up since annexation. It lies in an amphitheatre of hills at some distance from the site of the old town, which is said to have been founded by the Bangash in the fourteenth century. It is built on undulating ground with excellent natural drainage. The cantonment and civil station stand on high ground to the east and north-east of the native town. The garrison consists ordinarily of a mountain battery, some frontier garrison artillery, one native cavalry regiment, and three native infantry regiments. The municipality was constituted in 1873. The income

during the ten years ending 1902–3 averaged Rs. 40,700, and the expenditure Rs. 36,000. In 1903–4 the income was Rs. 50,500, chiefly derived from octroi; and the expenditure was Rs. 83,400. This sum includes an investment of Rs. 30,000 in Government securities. The receipts and expenditure of cantonment funds during the ten years ending 1902–3 averaged Rs. 5,600 and Rs. 5,500 respectively. The chief public institutions are the Anglo-vernacular high school maintained by the municipality, a civil hospital, and a female hospital. The town is of no commercial importance, but has a small manufacture of *lungīs* or turbans. Rifles used to be made at the neighbouring village of Jangal Khel, but the industry is now quite extinct.

Koh-i-Bāba.—A long mountain range stretching from east to west (34° 42′ to 35° 20′ N. and 68° 15′ to 61° 10′ E.) across the centre of Afghānistān, and forming part of the great backbone of the country. It is usually spoken of as a continuation of the HINDU KUSH, and is so in fact, though the ends of the ranges overlap and are united by a flat, open watershed, known as the Shibar pass. From this point the Koh-i-Bāba runs in a westerly direction to the south of Yak Walang, where it breaks into four branches. The southernmost, which is known as the Band-i-Duākhwān, the Band-i-Baiān, and by other names, continues along the south of the Hari Rūd valley to the immediate neighbourhood of Herāt, where it is known as the Band-i-Bor. The next branch is called the Safed Koh. North of this, the Siāh-Būbak, Band-i-Bāba, or Koh Siāh runs along the north of the Hari Rūd valley, parallel to the Band-i-Baiān, and forms the watershed between the Hari Rūd and Murghāb. The fourth branch strikes north-west, enclosing the basin of the Upper Murghāb, and dividing it from the deep valley and gorges of the Rūd-i-band-i-Amīr. Branching right and left, it forms the mass of mountains which are the natural boundary of this part of Afghān-Turkistān. The western half of these mountains is called the Band-i-Turkistān; the eastern half has no special name.

In physical features the western portion of the range actually called the Koh-i-Bāba, of which the highest peaks rise to over 16,000 feet, bears considerable resemblance to the Hindu Kush. To the south of the Koh-i-Bāba lies the Besūd district of the Hazārajāt, a hilly region of great elevation. North is the great plateau of Afghānistān, extending for 140 miles in the direction of the Oxus. As to the many passes which cross the Koh-i-Bāba, there is no reliable information, with the exception of the Irāk (about 13,000 feet), the Hajigak (about 12,000), and the Zard Sang (about 13,000).

Kohimā Subdivision.—Subdivision of the Nāgā Hills District, Eastern Bengal and Assam, lying between 24° 42′ and 26° 34′ N. and 93° 7′ and 94° 26′ E., with an area of 2,337 square miles. The whole

of the subdivision consists of hilly country inhabited by various tribes of Nāgās, of whom the most numerous and important are the Angāmīs and Lhotās. The average rainfall at Kohīmā is only 76 inches, but at Wokhā, farther north, it exceeds 100 inches. Population fell from 70,221 in 1891 to 68,619 in 1901, giving a density of 29 persons per square mile. The subdivision contained one town, KOHĪMĀ (population, 3,093), the District head-quarters; and 224 villages. A peculiarity of the subdivision is the terraced cultivation of the Angāmī Nāgās. This powerful and warlike tribe cut out the slopes of the hill-side into terraces built up with stone retaining walls, which are skilfully irrigated by channels distributing the water over the whole series. This system enables them to grow good rice at an elevation at which rice sown broadcast does not thrive. The principal source of revenue is house tax, which in 1903-4 was assessed at Rs. 34,000.

Kohīmā Town.—Head-quarters of the Nāgā Hills District, Eastern Bengal and Assam, situated in 25° 41′ N. and 94° 7′ E., about 5,000 feet above the level of the sea. The cart-road from Dimāpur in the Brahmaputra Valley to Manipur passes through the town. Population (1901), 3,093. The rainfall averages 76 inches, and the climate is cool and pleasant. The head-quarters of the District were first located at this place in 1878, with the object of bringing the powerful tribe of Angāmī Nāgās, in whose territory it is situated, more completely under control. The station is situated on a spur of the hill near the large Nāgā village from which it takes its name, and contains a small jail with accommodation for 32 persons and a hospital with 10 beds. The garrison consists of two companies of native infantry and a battalion of military police.

Kohīr.—Former *tāluk* of Bīdar District, Hyderābād State. *See* BĪDAR TĀLUK.

Kohīr.—Town in the District and *tāluk* of Bīdar, Hyderābād State, situated in 17° 36′ N. and 77° 43′ E., 24 miles south-east of Bīdar town. Population (1901), 6,379. It contains the tombs of two well-known Musalmān saints, besides numerous mosques; the Jāma Masjid, erected during the reign of the Bahmani kings, is a building of note. The town contains a middle and girls' school, a post office, and the police inspector's office. Kohīr is celebrated for its mangoes.

Kohistān.—The local name of a barren and hilly tract of country in Karāchi District, Sind, Bombay, composed of outlying spurs from the KĪRTHAR RANGE. The southern portion merges into extensive plains, separated by low lines of hills, which afford abundant grazing for herds of cattle after rain. The Kohistān is entirely dependent on rainfall, and cultivation is possible only where the rainfall has been impounded, or on one of the numerous watercourses. Some of these streams,

known as *nais*, are of considerable size, the chief being the **Bāran**, which flows into the Indus below Kotri.

The Kohistān is a *mahāl* or petty subdivision, with a population (1901) of 12,877. The revenue is Rs. 3,900. The population is nomadic and fluctuating, consisting chiefly of Sindīs and Baluchīs, formerly given to internal feuds, but now content to earn a frugal living by grazing herds of camels, cattle, sheep, and goats.

Kohlu.—*Tahsil* of the Sibi subdivision in the District of Sibi, Baluchistān, lying between 29° 43′ and 30° 2′ N. and 68° 58′ and 69° 32′ E. Its area is 362 square miles, and the population (1901), 1,743. It forms a triangular plateau about 3,900 feet above sea-level and has a pleasant climate. The head-quarters bear the same name as the *tahsīl*. Villages number nine. The land revenue in 1903–4 amounted to Rs. 14,154. On lands acquired by the Marris previous to 1892 revenue at the rate of one-twelfth of the produce is taken, an equal share being paid by the cultivator to the Marri chief. On other lands revenue is levied at the rate of one-sixth.

Koil.—Name of the head-quarters town and *tahsīl* of Alīgarh District, United Provinces, usually called ALĪGARH TOWN or TAHSĪL in official correspondence.

Koilkonda.—Former *tāluk* in Mahbūbnagar District, Hyderābād State, with an area of 546 square miles. The population in 1901, including *jāgīrs*, was 58,031, compared with 54,802 in 1891. The land revenue in 1901 was Rs. 64,000. In 1905 the *tāluk* was divided between Kodangal in Gulbarga District, and Pargi and Mahbūbnagar in Mahbūbnagar District.

Koilkuntla.—Central *tāluk* of Kurnool District, Madras, lying between 14° 57′ and 15° 29′ N. and 77° 59′ and 78° 33′ E., with an area of 572 square miles. The population in 1901 was 88,147, compared with 86,544 in 1891. Koilkuntla is more thickly populated than any other *tāluk* in the District except Rāmallakota. It contains 85 villages, but no town. The demand for land revenue and cesses in 1903-4 amounted to Rs. 3,10,000. The 'dry' lands of the villages on both sides of the Kunderu river, which flows through the eastern half of the *tāluk*, are the richest in the District, consisting of fertile black cotton soil. The annual rainfall is 22 inches, but the western portion receives only 17 inches. The people are more prosperous and robust than their neighbours, and are regarded as the most factious and litigious in the District, land disputes often leading to riots accompanied with bloodshed. The *tāluk* is very badly provided with communications.

Koilpatti.—Station on the South Indian Railway in the Sāttūr *tāluk* of Tinnevelly District, Madras, situated in 9° 10′ N. and 77° 52′ E. It is an *inām* village (that is, held on favourable tenure) and

a Union, with a population (1901) of 3,415, and possesses a dry healthy climate. There is a cotton-spinning mill under native management, and a Government experimental farm has recently been opened.

Kol.—A generic name applied by Hindus to the MUNDĀ, HO, and ORAON tribes of Bengal.

Kolāba District.—District in the Southern Division of the Bombay Presidency, lying between 17° 51′ and 19° 8′ N. and 72° 51′ and 73° 45′ E., with an area of 2,131 square miles. It is bounded on the north by Bombay harbour and the Kalyān and Murbād *tālukas* of Thāna District; on the east by the Western Ghāts, the Bhor State, and the Districts of Poona and Sātāra; on the south and south-west by Ratnāgiri; and on the west by the Janjīra State and the Arabian Sea.

Physical aspects.

Kolāba District is a rugged belt of country from 15 to 30 miles broad, stretching south from Thāna and Bombay harbour to the foot of the Mahābaleshwar hills, 75 miles south-east. Situated between the Western Ghāts and the sea, the District contains spurs of considerable regularity and height, running westwards at right angles to the main range, as well as isolated peaks or lofty detached ridges. A series of minor ranges also run north and south between the main range and the sea. The great wall of the Western Ghāts forms the chief natural feature. Of other ranges, the chief is the line of hills that from near the foot of the Bor pass stretches north west in the flat tops of Mātherān and Prabal. Running north and south through the centre of the Panvel *tāluka* is the broken spur which ends southwards in Karnāla or Funnel hill. Farther west is the lower line of the Parshik hills, and in the south the long ridges that centre in the precipitous fortified peak of Mānikgarh (1,80c feet). South of Bombay harbour a well-marked rugged belt rising in bare rocky slopes runs south and south-east, with the two leading peaks of Kankeshwar (1,000 feet) in the extreme north and Sāgargarh (1,164 feet) about 6 miles farther south. The most famous peak in the District is Raigarh, on a spur of the Western Ghāts, where Sivajī built his capital.

The sea frontage of the District throughout the greater part of its length is fringed by a belt of coco-nut and areca-nut palms. Behind this belt is situated a stretch of flat country devoted to rice cultivation. In many places, along the banks of the salt-water creeks, there are extensive tracts of salt marsh-land, some of them reclaimed, some still subject to tidal inundation, and others set apart for the manufacture of salt. A few small rivers, rising in the hills to the east of the District, pass through it to the sea. The chief of these are the Ulhās, Pātālganga, Ambā, Kundalika, Māndād, and Sāvitrī. Tidal inlets, of which the principal are the Ulvā or Panvel, the Pātālganga or Apta, the Ambā or Nāgothana, the Kundalika, Roha or Chaul, the Māndād,

and the Sāvitri or Bānkot creek in the south, run inland for 25 or 30 miles, forming highways for a brisk trade in rice, salt, firewood, and dried fish. These inlets have of late years silted up to a considerable extent, and it seems possible that their value as highways may in future decline on this account. The creek of the Pen river is navigable to Antora, 2 miles from Pen, by boats of 7 tons during ordinary tides, and by boats of 35 tons during spring-tides. Near the coast especially, the District is well supplied with reservoirs. Some of these are handsomely built of cut stone, but of no great size, and only a few hold water throughout the year.

The rock formation is trap. In the plains it is found in tabular masses a few feet below the soil and sometimes standing out from the surface. In the hills it is tabular and is also found in irregular masses and shapeless boulders, varying from a few inches to several feet in diameter. In many places the surface of the trap has a rusty hue showing the presence of iron. Kolāba has three hot springs, at Unheri near Nāgothana and at Son and Kondivti in Mahād.

The forest areas of Kolāba contain a variety of trees, of which the commonest are teak, mango, *ain* (*Terminalia tomentosa*), *jāmba* (*Xylia dolabriformis*), and *kinjal* (*Terminalia paniculata*). The leaves of the *apta* (*Bauhinia racemosa*), which is too small to yield timber, are used in the manufacture of native cigarettes; cart-wheels are made from the timber of the *khair* (*Acacia Catechu*); and the fruit of the tamarind (*chinch*) is largely utilized as medicine and spice. The *gorak chinch* or baobab (*Adansonia digitata*), though growing to an enormous size, is not utilized. Fuel is provided chiefly by the mangrove and *tivar* (*Sonneratia acida*), which grow in the salt marshes, and by such creepers and shrubs as the *phalsi* (*Grewia asiatica*), *kusar* (*Jasminum latifolium*), *kaneri* (*Nerium odorum*), and *garudvel* (*Entada scandens*). Other creepers are the *rāntur* (*Atylosia Lawii*), *mātisul* (*Leonotis nepetifolia*), and *sāpsan* (*Aristolochia indica*), which are used medicinally, and the *shikakai* (*Acacia concinna*), which bears a nut of cleansing properties.

For a hilly and wooded District, Kolāba is poorly stocked with game. Tigers and leopards are occasionally found, especially in the Sāgargarh range, and bears on the Western Ghāts. Hyenas and jackals abound. Bison, *sāmbar*, and *chītal* have been shot, but are very rare. Of game-birds, the chief is the snipe. Duck are neither common nor of many kinds. The other game-birds are partridge, quail, plover, lapwing, curlew, peafowl, grey jungle-fowl, red spur-fowl, and the common rock and green pigeons. Snakes are numerous but of no great variety, and the cobra, though common, does not cause any large number of deaths. In the coast villages, the fishermen cure large quantities of fish for export to Bombay by the inland creeks. The sea

fisheries, especially of the Alībāg villages, are of considerable importance, affording a livelihood to 6,800 fishermen in the District; but the latter are gradually spoiling their own prospects by the use of nets so constructed that small fry, as well as half-grown fish, are exterminated before they attain a marketable size. The chief species caught, mostly by means of stake-nets, are pomphlet, *bamelo* or *bombil*, and *halwa*.

There are four distinct climatic periods—the rains from June to October; the damp hot season in October and November on the cessation of the rains; the cold season from December to March; and the dry hot season from March to June. In the region about Alībāg there is always a sea-breeze. Mahād is almost entirely cut off from the sea-breeze, and is subject to much greater changes of temperature than most of the District. In the hot months the heat is very oppressive in Karjat, except on the hill-tops. The temperature varies from 65° in January to 92° in May, with an average of 80°. The rainy season is considered the healthy period of the year. The rainfall in the inland subdivisions is much heavier than on the coast, amounting to 130 inches. The annual fall at the District head-quarters averages 88 inches.

History.

Hindu, Muhammadan, Marāthā, and British rulers have, as throughout most of the Peninsula, in turn administered the District of Kolāba. But it is the rise, daring, and extinction of the pirate power of the Marāthā Angriā that vests the history of this part of the Konkan with a peculiar interest. The early rulers were most probably local chiefs. Shortly after the beginning of the Christian era, the Andhra dynasty, whose capital was Kolhāpur, were the overlords of Kolāba. About this time (A.D. 135 to 150), the Greek geographer Ptolemy describes the region of Kolāba under the name of Symulla or Timulla, probably the Chaul of later days. In Ptolemy's time the Sātavāhanas or Andhras were ruling in the Konkan as well as in the Deccan; and for many years the ports on the Kolāba seaboard were the emporia of a large traffic, not only inland, over the Western Ghāts across the Peninsula, but by way of the Red Sea and the Persian Gulf to Egypt, Arabia, and Abyssinia. In the sixth century Kolāba, with all the Northern Konkan, came under the sway of the Chālukyas, whose general, Chana-danda, sweeping the Mauryas or local rulers before him 'like a great wave,' captured the Maurya citadel Purī, 'the goddess of the fortunes of the western ocean.' In the thirteenth century, by which time the rule of the Chālukyas had passed away, the District was held by the Deogiri Yādavas.

Immediately prior to the appearance of the Muhammadans, tradition assigns to Kolāba a dynasty of Kanarese kings, probably the rulers of Vijayanagar. Nothing, however, is known about them. The Bahmanis, who ruled from 1347 to 1489, reduced the whole Konkan

to obedience, and held Chaul as well as other posts in Kolāba District. The Bahmani dynasty was followed by kings from Gujarāt. A period of Portuguese ascendancy established at Chaul (1507–1660) preceded the rise of the Angriās, and was partly contemporaneous with the conquest of all the rest of the District by the Mughals and Marāthās. The Mughals, who acquired the sovereignty in 1600, were in 1632 ousted by Shāhjī Bhonsla, a servant of the Bijāpur kings and father of Sivajī, who founded the Marāthā power. Sivajī built two small forts near Ghosāle and Raigarh; repaired the strongholds of Suvarndrug and Vijayadrug, which stand on the coast-line below Bombay; and in 1674 caused himself to be enthroned at Raigarh. Nine years after Sivajī's death in 1680, the seizure of Raigarh restored control of the country to the Mughals. The period of the Angriās, who terrorized the coast while the Muhammadans were powerful inland, lasted for 150 years—from 1690 to 1840, when Kānhojī II died in infancy and the country was taken over by the British.

Kānhojī, the first of the Angriās, was in 1698 the admiral of the Marāthā fleet, having his head-quarters at Kolāba, an island-fort close to Alībāg and within 20 miles of the present city of Bombay. From here he had long harassed shipping on the coast from Malabar to Bombay; in 1713 he threw off his allegiance on Rājā Shāhū, and having defeated and captured the Peshwā, set up an independent rule in ten forts and sixteen minor posts along the Konkan coasts. Having conquered the Sīdīs of Janjīra, his rivals in buccaneering, Kānhojī, with a considerable fleet of vessels, ranging from 150 to 200 tons burden, swept the seas from his fort of Vijayadrug. In 1717 his first piracies against English trade occurred. In retaliation the English assaulted Vijayadrug, but the assault was beaten off. On two occasions within the next four years, Kānhojī withstood the combined attacks of the English and Portuguese. On his death in 1731 the Angriā chiefship was weakened by division between Kānhojī's two sons, of whom Sambhojī Angriā was the more enterprising and able. Sambhojī was succeeded in 1748 by Tulājī; and from that date until the fall of Vijayadrug before the allied forces of the Peshwā and the British at Bombay, both British and Dutch commerce suffered severely from the Angriā pirates.

In 1756 the fort of Vijayadrug was captured by Admiral Watson and Colonel (afterwards Lord) Clive, who commanded the land forces. Fifteen hundred prisoners were taken, eight English and three Dutch captains were rescued from the underground dungeons in the neighbourhood of the fortress, and treasure to the value of 12½ lakhs was divided among the captors. Vijayadrug was handed over to the Peshwā, under whom Manajī and Raghujī, the descendants of an illegitimate branch of the first Angriās, held Kolāba fort as feudatories

of Poona. On the downfall of the Peshwā's rule in 1818, the allegiance of the Angriās was transferred to the British. In 1840 the death of Kānhojī II, the last representative of the original Angriās, afforded an opportunity to the Bombay Government to annex the forts of Suvarndrug, Vijayadrug, and Kolāba. The District has since enjoyed unbroken peace.

Kolāba District, with the exception of the *tāluka* of Alībāg, formed part of the dominions of the Peshwā, annexed by the British in 1818, on the overthrow of Bājī Rao. Alībāg lapsed in 1840. Kolāba island has still an evil reputation with mariners as the scene of many wrecks. Full nautical details regarding it are given in Taylor's *Sailing Directions*. Many houses in the town are built from the driftwood of vessels which have gone ashore. Ships are sometimes supposed to be intentionally wrecked here; the coast near Alībāg presents fair facilities for the escape of the crews.

The most interesting remains in the District are the Buddhist caves at Pāl, Kol, Kuda, Kondāne, and Ambivli, and the Brāhmanical caves at ELEPHANTA. There are numerous churches and forts built by the Portuguese. The former strongholds of the Marāthās and the Angriās are imposing rock-built structures, the chief being Raigarh, where Sivajī was crowned; Kolāba fort, the stronghold of Angriā in the eighteenth century; Birvādi and Lingāna, built by Sivajī to secure his share of Kolāba against his neighbours; Khānderi, and Underi.

Population.

The population of the District was returned at 524,269 in 1872 and 564,892 in 1881. It rose to 594,872 in 1891, and to 605,566 in 1901. The following table shows the distribution of population by *tālukas* according to the Census of 1901 :—

Tāluka.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Panvel . .	272	2	226	112,515	414	+ 6	6,386
Karjat . .	359	...	270	87,415	243	+ 2	4,253
Alībāg . .	193	3	177	83,647	433	+ 7	5,917
Pen . .	293	1	198	76,559	261	+ 3	4,524
Roha . .	203	1	133	47,780	235	+ 4	2,194
Māngaon .	352	...	226	83,415	237	− 5	1,899
Mahād . .	459	1	246	114,235	249	− 4	3,178
District total	2,131	8	1,476	605,566	284	+ 2	28,351

The Alībāg and Panvel *tālukas* being naturally well placed and close to Bombay, the density of population is higher than in the rest of the District. The chief towns are URAN, PANVEL, PEN, and ALĪBĀG. Classified according to religion, Hindus form 94 per cent. and Musal-

māns 5 per cent. of the total. The language of the District is Marāthī, which is spoken by more than 99 per cent. of the population.

Among Hindus, the most important classes are the Brāhmans (24,000), chiefly Konkanasths (14,000), who own large gardens and palm groves along the coast. In the south they are the landlords or *khots* of many villages, holding the position of middlemen between Government and the actual cultivators. As in Thāna, they and Prabhus (6,000) form an influential element in the population. The Vānīs (8,000) are traders. Agrīs (113,000) are tillers of salt land and makers of salt. Marāthās and Kunbīs (210,000) are rice cultivators. Kolīs (25,000) are principally fishermen and sailors. Bhandāris (6,000) are toddy-drawers, and Mālīs (14,000) are gardeners.

The hill tribes include the Thākurs and Kāthkaris; and the unsettled tribes, the Vaddars and the Vanjāras. The Thākurs (18,000) are small squat men, with hard irregular features, in some degree redeemed by an honest kindly expression. They speak Marāthī, are harmless and hard-working, the women doing as much work as the men. When not employed on land cultivation, they find stray jobs or gather firewood for sale. The Kāthkaris (30,000) are cultivators, labourers, and firewood sellers, and were originally, as the name implies, cutch (*kāth*) boilers. Their women, tall and slim, singularly dirty and unkempt, are hard workers, and help the men by hawking head-loads of firewood. Kāthkaris, as a rule, are much darker and slimmer than the other forest tribes; they rank among the lowest of the low, their very touch being thought to defile. They eat every sort of flesh, except the cow and the monkey. They are poor, and much given to drinking. In 1902 they were granted large areas of forest for *dalhi* cultivation, with the object of inducing them to follow more sober habits; but the object has not been wholly successful, owing to their ignorance of agriculture. The Vaddars (400) are rude, intemperate, and unsettled in their habits, gathering wherever building is going on. They are quarry-men, and make grindstones, handmills, and rolling-pins.

The Bani-Israil, or Indian Jews, numbering about 2,000, are chiefly found in the seaboard tracts. They are of two classes, the white and black; the white, according to their own story, are descended from the original immigrants, while the black are descendants of converts or of women of the country. A considerable number of them enlist in the native army, and are esteemed as soldiers. They maintain the rite of circumcision, and faithfully accept the Old Testament. Their home language is Marāthī, but in the synagogues their scriptures are read in Hebrew. The Jews monopolize the work of oil-pressing to so great an extent that they are generally known as oilmen or *telis*. The late Dr. Wilson was of opinion that the Bani-Israil are descended from the lost tribes, founding his belief upon the fact that they possessed

none of the Jewish names which date from after the Captivity, and none of the Jewish scriptures or writings after that date. Some of the Musalmāns are the descendants of converted Hindus; others trace their origin to foreign invaders; and a few are said to represent the early Arab traders and settlers. The last named form no distinct community, but consist of a few families that have not intermarried with Musalmāns of the country. The percentage of the population supported by agriculture is 72. The industrial class numbers 71,000 in all.

Of the 1,202 native Christians in 1901, more than 500 were Roman Catholics and 270 were Congregationalists. The former are found chiefly in the Karanja island of the Uran *petha*. As early as 1535 there were three churches in the island. The United Free Church Mission of Scotland and an American Mission have establishments in the District. The former maintains a high school, three primary schools for the depressed classes, and two girls' schools.

Agriculture.

There are four descriptions of soil. The alluvial tract is composed of various disintegrated rocks of the overlying trap formation, with a larger or smaller proportion of calcareous substance. This is by far the richest variety, and occupies the greater portion of the District. The slopes of the hills and plateaux are covered with soil formed by the disintegration of laterite and trap. Though fitted for the cultivation of some crops, such as *nāgli*, *vari*, and *san*-hemp, this soil, owing to its shallowness, soon becomes exhausted, and has to be left fallow for a few years. Clayey mould, resting upon trap, is called *khārapāt* or 'salt land.' Soil containing marine deposits, a large portion of sand, and other matter in concretion, lies immediately upon the sea-coast, and is favourable for garden crops. Rice is grown on saline as well as on sweet land. Between December and May the plot of ground chosen for a nursery is covered with cow-dung and brushwood; this is overlaid with thick grass, and earth is spread over the surface; the whole is then set on fire on the leeward side, generally towards morning, after the heavy dew has collected. In June, after the land has been sprinkled by a few showers, the nursery is sown before being ploughed. The plants shoot up after a few heavy falls of rain. In the beginning of July the seedlings are planted out, and between October and November the reaping commences. On saline land no plough is used, and the soil is not manured. In the beginning of June, when the ground has become thoroughly saturated, the seed is either sown in the mud, or, where the land is low and subject to the overflow of rain-water, the seed is wetted and placed in a heap until it sprouts and is then thrown on to the surface of the water. No transplanting takes place, but the crop is thinned when necessary. Should a field

by any accident be flooded by salt water for three years in succession, the crops deteriorate.

The District is chiefly *ryotwāri*. *Khots* and *izāfatdārs* own 733 and 17 square miles respectively, while *inām* lands cover about 7 square miles. The chief statistics of cultivation in 1903–4 are shown below, in square miles:—

Tāluka.	Total area.	Cultivated.	Irrigated.	Cultivable waste.	Forests.
Panvel	272	146	1	52	58
Karjat	359	184	...	58	85
Alībāg	193	102	2	32	46
Pen	292	122	...	41	104
Roha	204	98	...	32	63
Māngaon	358	219	...	83	45
Mahād	459	300	...	103	47
Total	*2,137	1,171	3	401	448

* Statistics are not available for 72 square miles of this area. These figures are based on the latest information.

Rice, the chief staple of the District, holds the first place with 391 square miles or 33 per cent. of the total cultivated area. The two main kinds are red and white rice. Red rice is inferior, and is grown only in the salt low-lying lands near creeks. The poorer kinds of grain called *nāgli* (90 square miles), *vari* (69), *harik* (27), which form the chief food-supply of the people, are also grown in considerable quantities, especially on the flat tops and terraced sides of the hills. *Vāl* occupied 14 square miles and *udīd* 9 square miles. The latter is grown chiefly in Mahād, Māngaon, Karjat, and Roha. Of other pulses, *tur* and *mūg* are grown in Mahād, Māngaon, and Roha, and gram in Māngaon, Panvel, and Karjat. Sesamum, occupying 6 square miles, is raised mostly in Māngaon and Mahād. Niger-seed occupied 3 square miles. Cotton is now rarely grown, but was cultivated with considerable success during the great development of the production of Indian cotton at the close of the eighteenth century. *San*-hemp is grown in Māngaon. The betel-vine and the areca-nut palm are grown in many gardens. The special garden produce is pineapple, which is cultivated in large quantities in Chaul and Revadanda.

The most interesting feature in the agriculture of Kolāba District, especially in Alībāg and in Pen, is the large area of salt marsh and mangrove swamps reclaimed for the growth of rice. These tracts, situated along the banks of tidal creeks, are locally known as *khārapāt* or 'saline land.' Most of the *shilotris* or embankments, which save the land from tidal flooding, are said to have been built between 1755 and 1780 under the Angriās by men of position and capital, who undertook, on the grant of special terms, to make the embankments and to keep

them in repair. In several cases the agreements were never fulfilled; and as the matter escaped notice, the foreshore, which should rightly have lapsed to Government, still remains in possession of the original grantees. For many years these reclamations were divided into rice-fields and salt-pans. The salt-pans were gradually closed between 1858 and 1872; and about two-thirds of the area formerly devoted to salt-making has now been brought under tillage. Each reclamation has two banks, an outer and an inner. In the outer bank are sluice-gates which are kept closed from October to June, but, as soon as the rains set in, are opened to allow the rain-water to escape. Two years after the embankment is completed, rice is sown in the reclaimed land, in order that the decayed straw may offer a resting-place and supply nourishment to grass seeds. Five years generally elapse before any crop is raised. More than 14,000 acres have been reclaimed in this way. The reclamation of saline land is encouraged by no revenue being levied for the first ten years, and full revenue only after thirty years. Under the Land Improvement and Agriculturists' Loans Acts advances have been made to cultivators amounting, during the decade ending 1903–4, to 2 lakhs, of which Rs. 61,000 was advanced in 1896–7 and Rs. 33,000 and Rs. 37,000 in 1895–6 and 1899–1900 respectively.

Except the Gujarāt bullocks kept by a few traders and large landowners, almost all the cattle of the District are of local breed. The Kolāba buffaloes are smaller, blacker, and smoother-skinned than those of Gujarāt. Sheep are usually imported from the Deccan. Goats are kept by some Musalmāns and lower-class Hindus, chiefly for milk. Ponies are brought from the Deccan by Dhangars and Vanjāras.

Of the total area of cultivated land, only 3 square miles or 0·5 per cent. were irrigated in 1903–4. The sources are wells and tanks, irrigating respectively 1,300 and 15 acres, and other sources 478 acres. The only part of Kolāba where there is much irrigation is along the west coast of Alībāg in a belt known as the Ashtāgar or 'eight plantations.' This tract includes the lands of eight villages covering 14 square miles, all of them with large areas of closely planted coco-nut gardens and orchards, irrigated from wells. There are numerous river dams. The wells, whose brackish water is especially suited to the growth of coco-nut palms, are fitted with Persian wheels or *rahāts*.

Forests.

Kolāba is fairly rich in forest, the teak and black-wood tracts being especially valuable. The Kolāba teak has been pronounced by competent judges the best grown in the Konkan, and inferior only to that of Malabar. Considerable damage has been done to the forests in past years by indiscriminate lopping; but the villagers are now commencing to realize the need of measures of conservancy. The value of the forests is increased by their proximity

to Bombay, for they may be said to lie around the mouth of the harbour. The curved knees are particularly adapted for the building of small vessels. The timber trade of the District has two main branches—an inland trade in wood for building purposes, and a coast trade in firewood and crooks for ship-building. The total area of forest in 1903–4 was about 458[1] square miles, of which 449 square miles were 'reserved,' chiefly in Pen and Nāgothana. The revenue in the same year was Rs. 83,750.

Except patches of mangrove along the river banks, the forests of Kolāba are all on the slopes and tops of hills. In the northern *tālukas* Karjat has valuable Reserves in both the Western Ghāts and the Mātherān-Tavli range. Panvel also has a considerable forest area, but much of it, except the teak-coppiced slopes of Mānikgarh, is of little value. Each of the central *tālukas*—Pen, Alībāg, and Roha—has large rich forests, while the less thickly wooded southern *tālukas* of Māngaon and Mahād have few Reserves. Teak is the most widely spread and the most valuable tree. Next come the mango, *sisu*, black-wood; *dhaura* (*Anogeissus latifolia*), once plentiful but now rather scarce; and the three principal evergreen hill-forest trees—*ain*, a valuable and common tree for house-building and tool-making, *jāmba*, and *kinjal* (*Terminalia paniculata*). The *apta* (*Bauhinia racemosa*), though of almost no use as timber, supplies leaves for country cigarettes or *bīdīs*. Nut-yielders include the *avla* (*Phyllanthus Emblica*), the tamarind, and the *hirda* (*Terminalia Chebula*); and liquor-yielders the *mahuā*, the coco-nut, the palmyra, and the wild thick-stemmed palm. Minor forest produce consists of fruits, gums, and grass.

The only mineral known to occur in Kolāba is iron, of which traces are found in laterite in different parts of the District. Aluminium occurs in the form of transcite in the hills around Mātherān. Good building stone is everywhere abundant; sand is plentiful in the rivers; and lime, both nodular and from shells, is burnt in small quantities.

Trade and communications.

Salt is extensively made by evaporation, and its production furnishes profitable employment in the fair season, when the cultivators are not engaged in agriculture. It is produced in large quantities in the Pen and Panvel *tālukas*, but the Pen trade is falling off. The District contains 155 salt-works, which produce nearly 2½ million maunds of salt yearly. The weaving of silk, a relic of Portuguese times, is practised at Chaul; but the manufacture has declined since 1668, about which time a migration of weavers took place and the first street was built in Bombay to receive them. The extraction of oil from sesamum, the coco-nut, and the ground-nut, and the preparation of coco-nut fibre, also support many families. The manufacture of cart-wheels at Panvel is a large industry.

[1] This figure is taken from the Forest Administration Report for 1903–4.

The preparation of spirits, a business entirely in the hands of Pārsīs, is restricted to Uran, where there are numerous large distilleries.

The principal trade centres of the District are Pen, Panvel, Karjat, Nāgothana, Revadanda, Roha, Goregaon, and Mahād. The chief articles of export are rice, salt, firewood, grass, timber, vegetables, fruits, and dried fish. The supply of vegetables of various sorts to Bombay from the Alībāg and Panvel *tālukas* has increased on a remarkably large scale, and also the provision of fuel from the Alībāg, Pen, and Roha *tālukas*. Grass is sent to Bombay in large quantities from the Panvel and Pen *tālukas*. The imports consist of Malabar teak, brass pots from Poona and Nāsik, dates, grain, piece-goods, oil, butter, garlic, potatoes, turmeric, sugar, and molasses. The District appears on the whole to be well supplied with means of transporting and exporting produce, a great portion being within easy reach of water-carriage. There are five seaports in the District. During the ten years ending 1902–3 the total value of sea-borne trade averaged nearly 177 lakhs, being imports about 31 lakhs and exports about 146 lakhs. In 1903–4 the imports were valued at 32 lakhs and the exports at 121 lakhs; total value, 153 lakhs. Minor markets and fairs are held periodically at thirty places in the District. Baniās from Mārwār and Gujarāt are the chief shopkeepers and money-lenders.

The District is served by the Great Indian Peninsula Railway, which passes through the Karjat *tāluka* and the Khālāpur *petha*. In addition to a steamer ferry between Bombay, Dharamtar, and Ulva, there is direct steamer communication for passengers and freight between Bombay and the coast ports during the fair season. There are three main roads over the Bor, the Fitzgerald, and the Varandha *ghāts*, which connect the District with the interior and are available for traffic all the year round. The total length of metalled roads is 87 miles, and of unmetalled roads 160 miles. The Public Works department maintains 78 miles of the former and 85 miles of the latter. Avenues of trees are planted along 37 miles.

The largest bridge is one of 56 spans at Māngaon across the Nizāmpur-Kāl. At Nāgothana there is a masonry bridge, built in 1580 at a cost of 3 lakhs to facilitate the march of the Ahmadnagar king's troops into Chaul.

Famine.

The oldest scarcity of which local memory remains was the famine of 1803. The distress caused by want of rain and failure of crops was increased by the influx of starving people from the Deccan. Many children are said to have been sold for food. The price of rice rose to about a seer for a rupee. To relieve distress, entire remissions of revenue, during periods varying from eight months to two years, were granted. In 1817-8 there was a great scarcity of food, approaching to a famine. In 1848, in the old Sānkshi division, part

of the rice crop on saline land was damaged by unusually high spring-tides. Remissions were granted to the amount of Rs. 37,750. In 1852 heavy rain damaged grain and other produce stacked in the fields. In 1854 an exceedingly good harvest was the outcome of a most favourable rainfall; but on November 1 a terrible hurricane completely destroyed every sort of field produce, whether standing or stacked, felling also coco-nut and areca-nut plantations. Remissions to the amount of more than Rs. 12,000 were granted. In 1871 there was a serious drought, particularly in the southern half of the District. In 1875–6 and in 1876–7 floods did much damage to the same tract. In 1878–9 the cold-season crops were damaged by locusts.

Administration.

The District is divided into seven *tālukas*, ALĪBĀG, PEN, PANVEL, KARJAT, ROHA, MĀNGAON, and MAHĀD, usually in charge of one member of the Indian Civil Service and a Deputy-Collector recruited in India. The Khālāpur, Uran or Karanja, and Nāgothana *pethas* are included in the Karjat, Panvel, and Pen *tālukas*. The Collector is *ex-officio* Political Agent for the Janjīra State.

The District is under the sessions division of Thāna, and the District Judge of Thāna disposes of civil appeals from Kolāba. During the monsoon the District Magistrate is invested with the powers of a Sessions Judge. There are five Subordinate Judges. The District Judge of Thāna acts as a court of appeal from the Subordinate Judges, who decide all original suits, except those in which Government is a party and applications under special Acts. There are twenty-five officers to administer criminal justice. The commonest form of crime is petty theft; but cases of homicide, hurt, and rioting occasionally occur and are usually ascribable in the first instance to drink, to which a large majority of the population are addicted. In years of scarcity dacoities are sometimes committed by immigrants from the Deccan; but as a rule this form of crime is unknown.

The District was first included in Ratnāgiri and then in Thāna. In 1853 it was made a sub-collectorate and in 1869 a separate District. After annexation in 1818, the practice of paying revenue in grain was for some time continued; and during the period of depressions in prices, 1823–34, the District fared better than Thāna, where money payments were taken. From 1834 to 1854 the country improved, population increased, and reductions were made in the Government demand. Between 1854 and 1866 survey rates were introduced, and as this occurred in some parts before the rapid rise of prices in that period, the cultivators became extremely prosperous. Other parts were settled under the influence of high prices, and for a time their condition was depressed, but on the whole cultivation and revenue have both advanced. The revision survey settlement was carried out

in the whole of the District between 1889 and 1904. The revision found an increase in the cultivated area of 0·3 per cent. and enhanced the total revenue from 11 to 13 lakhs. The average assessment per acre of 'dry' land is 5 annas, of rice land Rs. 4–11, of garden land Rs. 9–8.

Collections on account of land revenue and revenue from all sources have been, in thousands of rupees:—

	1880–1.	1890–1.	1900–1.	1903–4.
Land revenue	7,28	10,03	13,90	13,58
Total revenue	10,44	20,79	23,14	24,63

A peculiarity of Kolāba District is the *khoti* tenure, which exists in 445 villages. The *khot* was originally a mere farmer of the revenue from year to year, but this right to act as middleman became hereditary, although there was no proprietary right. Under the settlement, the *khot*, as peasant proprietor, pays the survey rates, while the actual cultivators pay rent to the *khot*, not exceeding an excess of 50 per cent. above the Government demand, which constitutes the profit of the *khot*. Most of the present *khots* are representatives of the original farmers, but in some cases they have sold or mortgaged their rights.

The District has seven municipalities: namely, ALĪBĀG, PEN, ROHA ASHTAMI, MAHĀD, PANVEL, URAN, and MĀTHERĀN. Outside their limits, local affairs are managed by the District board and seven *tāluka* boards. The total receipts in 1903–4 were 1·53 lakhs and the expenditure 1·44 lakhs. The principal source of income is the land cess. Over Rs. 52,000 was devoted to the construction and maintenance of roads and buildings.

The police force is under the control of the District Superintendent, assisted by one inspector. There are twelve police stations, with a total of 555 police, including 8 chief constables, 103 head constables, and 444 constables. There are nine subsidiary jails and one lock-up in the District, with accommodation for 230 prisoners. The daily average number of prisoners in 1904 was 24, of whom 2 were females.

Kolāba stands thirteenth among the 24 Districts of the Presidency in regard to the literacy of its population, of whom 4·7 per cent. (9 males and 0·3 females) could read and write in 1901. In 1881 the number of schools was 76, with 4,520 pupils. The pupils increased to 9,481 (exclusive of 1,117 in 68 private schools) in 1891, and further to 11,130 (including 1,256 in 85 private schools) in 1901. In 1903–4 there were 242 schools attended by 9,277 pupils, including 1,021 girls. Of the 193 institutions classed as public, one is a high school, 188 are primary, and 4 middle schools; 139 are managed by the District board, 24 by municipalities, and 30 are aided. The total expenditure on education

in 1903–4 was Rs. 87,000, of which Rs. 16,000 was derived from fees. Of the total, 83 per cent. was devoted to primary schools.

The District contains 2 hospitals and 6 dispensaries, with accommodation for 52 persons. In these institutions 62,000 cases, including 178 in-patients, were treated in 1904, and 902 operations were performed. The expenditure was Rs. 18,500, of which nearly Rs. 9,300 was met from Local and municipal funds.

The number of persons successfully vaccinated in 1903–4 was 14,573, representing a proportion of 24 per 1,000 of population, which is slightly below the average of the Presidency.

[Sir J. M. Campbell, *Gazetteer of the Bombay Presidency*, vol. vi (1883); Major J. Francis, *Settlement Report of the Kolāba District* (1863).]

Kolachel.—Seaport in the Eraniel *tāluk* of Travancore State, Madras, situated in 8° 11′ N. and 77° 18′ E. Population (1901), about 1,000. From 15 to 20 steamers and 40 to 50 native craft touch here annually during the shipping season, September to April. The principal exports are jaggery (coarse sugar), coffee, salted fish, palmyra fibre, coir, and timber; and the chief imports are rice, Bengal gram, crockery, and iron. It was once the site of an indigo factory. The place is referred to by Bartolomeo as a safe harbour well-known to the ancients, and was occupied for a time by the Danes; the Dutch sustained a signal defeat here at the hands of Rāma Ayyan Dalawa, commander of the Travancore forces, in 1740, from which date began the decline of their power on the west coast.

Kolair.—Lake in Kistna District, Madras. *See* COLAIR.

Kolār District.—District in the east of the State of Mysore, lying between 12° 46′ and 13° 58′ N. and 77° 22′ and 78° 35′ E., with an area of 3,180 square miles. It is bounded on the north by the Anantapur and Cuddapah Districts of Madras; on the east by the Cuddapah and North Arcot Districts of Madras; on the south by the Salem District of Madras; and on the west by Bangalore and Tumkūr Districts.

Physical aspects.

The District borders on the Eastern Ghāts, but touches them only on the north-east and south, between these points receding to about 15 miles from the range. The main part comprises the head of the Pālār river system on the south, and that of the Penner on the north, separated by an imaginary line from Chik-Ballāpur to Srīnivāspur. In and around Nandidroog in the north-west are the sources of the following rivers, radiating in all directions: the Arkāvati, Penner, Chitrāvati, Pāpaghni, Pālār, and Ponnaiyār. The principal chain of mountains is the range running north from Nandidroog (4,851 feet), the highest point, to Penukonda. Through the middle of the District,

separated by intervals, the Tyākal and Vokkaleri hills, the Kolār hills (highest point 4,026 feet), Rahmāngarh (4,227 feet) and Ambājidurga (4,399 feet), with the Dokkalakonda, run north to the frontier. There are other lines of low hills in the east, those in the north-east inclining to a circular arrangement, enclosing elevated valleys, occupied by villages. The central and eastern parts of the District, forming the valley of the Pālār, are undulating and well cultivated. A considerable depression occurs in the valley of the Penner towards Goribidnūr, in the north-west. The outlying parts along the northern frontier mark with alternate rise and fall the descent to the level of the Anantapur country. On the east the Mugli and Naikaneri passes to the plains of the Carnatic are some distance beyond the boundary.

The rocks of the District are for the most part similar to those of the adjoining District of Bangalore, being composed of gneiss, but with a smaller admixture of mica and a paler felspar. The rock of Nandidroog is almost a solid monolithic mass of granite, rising 1,800 feet above the plain. The low hills which lie across the course of the Pālār and run south through the Bowringpet *tāluk* are composed of a soft ferruginous clay slate. They have flat tops and are mostly barren, though the soil about them is composed of fine argillaceous red earth. The Kolār auriferous band of schists runs north and south for about 40 miles, with a maximum width of about 4 miles. In the southern portion are situated the KOLĀR GOLD FIELDS. The band is composed essentially of hornblende rocks, usually schistose, and some well-marked layers of ferruginous quartz rocks. Recent opinion favours the view that the hornblende schists which form the main mass of the band are metamorphosed basic lava-flows. There is evidence tending to show that the surrounding granites and gneisses are largely intrusive with regard to the schists.

The indigenous flora is similar to that of Bangalore District. The numerous fine tanks are favourable to aquatic genera. Partly in and partly out of the water are found many species of reeds. Clinging to the tank embankments and upper level margins are *Pongamia glabra* and other moisture-loving plants. The hill flora is well represented on the Nandidroog range. Nearly all the plants in the plain ascend the slopes of the hill to varying heights, some to the very summit. These are intermixed with species rarely or never found in the plain. The plateau on the top, enclosed by the fort walls, contains a peculiarly mixed flora of Maidān, Malnād, and domesticated plants. Quite the commonest tree is *Eugenia Jambolana*, and there are some fine specimens of *Michelia Champaca*. Eucalyptus and casuarina have grown well. The Gold Fields are situated between low ranges of stony hills, the valley being naturally bleak and dreary in appearance, with the poorest vegetation. But since mining operations were started,

avenues of trees, such as various species of *Ficus*, *Melia*, &c., have been planted, and gardens well stocked with flowering plants usual among English residents have sprung into existence. The most successful, however, are those formed in soil laid down for the purpose.

The climate does not differ materially from that of Bangalore District, but the rainfall is somewhat less, and depends more on the north-east monsoon than on the south-west. The country is generally healthy, remarkably so in the neighbourhood of Chik-Ballāpur and Kolār, but plague has been severe in the former. Cholera and other epidemics which used frequently to prevail in the District, owing to crowds of travellers and especially pilgrims to and from Tirupati constantly passing through, have been reduced to a minimum by the diversion of this traffic to the railway. The dangers arising from the recent large influx of labourers to the gold-mines are kept well under control by the Sanitary Board. The annual rainfall averages nearly 29 inches, 11 inches of the total falling in September and October. Chik-Ballāpur and Mulbāgal get more than the average, and Bāgepalli less. The mean annual temperature is about 75°, with a maximum of 95° in April and May, and a minimum of 57° in February.

History.

The earliest rulers of whom there is an authentic account were the Mahāvalis or Bānas, who held the east of the District. They claim descent from Mahā Bali, or 'Bali the Great,' a Daitya king who by his penance had acquired such power that he defeated Indra and dominated the world. In order to put him down Vishnu assumed the Vāmana or Dwarf incarnation. Bāna, or Bānāsura, was Bali's son, and had a thousand arms. His daughter was seduced by Krishna's grandson, and a war ensued. Siva guarded the gates and fought for Bānāsura, who worshipped him with his thousand hands. But Krishna found means to overthrow Siva, and having taken the city, cut off Bānāsura's hands, except two, with which he obliged him to do homage. The Mahāvalis may have been connected with Mahābalipur, known as the Seven Pagodas, on the coast south of Madras. They continued in power, being also called Bānas, till the tenth century, but for a long time had the Pallavas as overlords. Their later capital was Paduvipuri (perhaps Padavedu in North Arcot). During their time Avani was an important sacred place, the seat of a Brāhman community. The Vaidumbas also appear in a few inscriptions in the north. The Pallavas were rulers over the whole of the Telugu country and over the Tamil country as far as Trichinopoly. Their capital was originally at Vengi, but from an early period was established at Kānchi (Conjeeveram). From the second to the eleventh century all the west of the District was included in the kingdom of the Gangas, who had the titles 'Lord of Kuvalāla-pura'

(Kolār) and 'Lord of Nandagiri' (Nandidroog). They were succeeded about 998 by the Cholas, who gave the District the name of Nikarilichola-mandala. About 1116 the Cholas were driven out of the Mysore country by the Hoysalas, the eastern boundary of whose kingdom was at Nangali. When in 1254 a partition of the Hoysala territories took place between the two sons of Somesvara, Kolār District went with the Tamil country to Rāmanātha. But the kingdom was again united in the next reign under the Hoysala king, Ballāla III. During the Vijayanagar dominion Mulbāgal was the seat of government for the District. At the close of the fifteenth century Sāluva Narasimha, a powerful chief of Karnāta and Telingāna, and general of the Vijayanagar forces, stopped in Kolār District the invasion of the Bahmani Sultān, who was overrunning the whole of the Vijayanagar territories. Narasimha himself then usurped the throne of Vijayanagar. Under the later Vijayanagar kings, Tamme Gauda, one of the chiefs of the Avati family, established himself at Sugatūr, and for his military services gained the title of Chikka Rāyal and the possession of the east of the District. Another of these chiefs in 1476 founded the Chik-Ballāpur State in the west, which was supported in the eighteenth century by Morāri Rao, the Marāthā chief of Gooty. In the seventeenth century the District was subdued by Bijāpur, and made part of the *jāgīr* of Shāhjī. The Mughals afterwards held it for seventy years, attaching it to the province of Sīra. During this period Fateh Muhammad, the father of Haidar Alī, became Faujdār of Kolār. It next passed into the hands of the Marāthās, of the Nawāb of Cuddapah, and then of Basālat Jang, chief of Adoni and brother of the Nizām. He in 1761 ceded Kolār and Hoskote to Haidar Alī. Mulbāgal and Kolār were held for a time by the British in 1768. In 1770 the Marāthās again seized the District, but it was recovered by Haidar. In 1791 it was a second time taken by the British, but restored to Mysore at the peace of 1792.

Avani, Betmangala, and Tekal contain memorials of antiquity. At Nonamangala, south of Mālūr, were discovered in 1897 the foundations of a Jain temple, with inscribed plates of the fourth and fifth centuries, and a number of images, musical instruments, and other articles. The ancient temples of Nandīsvara at Nandi and Kolāramma at Kolār are of interest. There is some fine carving in the former. In their present form they are of the Chola period, dating from early in the eleventh century. At Kolār is also the Imāmbāra or mausoleum of Haidar Alī's family. The numerous inscriptions of the District have been translated and published.

The population was 646,837 in 1871, 481,191 in 1881, 591,113 in 1891, and 723,600 in 1901. The fall in 1881 was due to the famine of 1876–8. By religion, in 1901, there were 663,940 Hindus, 43,149 Musal-

māns, 9,605 Christians, 6,019 Animists, 880 Jains, and 7 'others.' The density of population was 228 per square mile, that for the whole State being 185. The KOLĀR GOLD FIELDS (population, 38,204) is the only place with more than 20,000 inhabitants. The head-quarters of the District are at KOLĀR TOWN.

Population.

The following are the principal statistics of population in 1901 :—

Tāluk.	Area in square miles.	Number of Towns.	Number of Villages.	Population.	Population per square mile.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Kolār	283	1	334	75,648	267	+ 4.1	4,747
Mulbāgal	327	1	351	66,899	205	+ 17.6	3,112
Bowringpet	337	2	409	128,193	381	+ 80.6	9,532
Mālūr	267	1	374	61,908	232	+ 14.3	2,598
Sidlaghatta	329	1	353	70,022	213	+ 17.6	3,074
Chik-Ballāpur	250	1	266	56,057	224	+ 8.7	2,697
Goribidnūr	343	1	268	83,296	243	+ 15.7	3,731
Bāgepalli	447	2	372	65,621	147	+ 13.0	2,169
Chintāmani	272	1	341	57,144	210	+ 19.9	2,724
Srīnivāspur	325	1	341	58,812	181	+ 23.8	2,521
District total	3,180	12	3,409	723,600	228	+ 22.4	36,905

The Wokkaligas or cultivators, 181,000, are the most numerous caste; the outcaste Holeyas and Mādigas number 91,000 and 48,000; Bedas, variously employed, 56,000; Banajigas or traders, 46,000; Kurubas or shepherds, 39,000; and Woddas or stonemasons, 30,000. Brāhmans number 26,000, and Lingāyats 11,000. Of Musalmāns, 26,000 are Shaikhs, 7,300 Saiyids, and 6,000 Pathāns. Nomad Koracha and Korama number 3,700, and Lambānis 1,000. According to occupations, 13 per cent. of the population are engaged in unskilled labour not agricultural, nearly a third of them at the Gold Fields; 11 per cent. are engaged in the preparation and supply of material substances; and 62 per cent. in agriculture and pasture.

The number of Christians is 9,600, of whom 7,000 are at the Gold Fields. French Jesuits opened a Telugu mission in Chik-Ballāpur and other places in 1702, and the Italian miners at the Gold Fields are mostly Roman Catholics. There are also Anglican and Wesleyan churches for the mining population. Of Protestant missions, the London Mission has stations at Chik-Ballāpur, Mālūr, and other places; and the American Methodist Episcopal Mission has a station at Kolār town, where they have a large industrial school.

Agriculture.

The soil on the high grounds is red and gravelly, with rocks of gneiss or granite, of little cohesion, very often appearing on the surface. The lower parts of these high grounds are intersected by nullahs or deep ravines, torn by the torrents of

water precipitated from the heights in the rainy season. The tops of the ridges are usually very barren, producing nothing but small jungle. The soil in the valleys is a good loamy mixture, formed of the finer particles of the decomposed rocks, washed down and deposited during the rains. On the first ascent from the valley the soil is of a middling quality, suited for 'dry crops,' being a mixture of loam, sand, and oxide of iron, with a proportion of vegetable and animal matter. Higher up, towards the top of the ridge, a siliceous sand prevails in the soil, which is on that account adapted only for horse-gram. Below the superficial soil there is commonly a bed of gravel, which immediately covers a gneissic or granitic rock, very often in a state of disintegration considerably advanced.

The following table gives statistics of cultivation in 1903-4, in square miles:—

Tāluk.	Area shown in the revenue accounts.				
	Total.	Cultivated.	Irrigated.	Forests.	Cultivable waste.
Kolār	236	79	19	3	15
Mulbāgal	291	87	17	24	36
Bowringpet	282	98	13	31	28
Mālūr	213	83	15	6	11
Sidlaghatta	285	78	13	4	19
Chik-Ballāpur	217	60	10	70	27
Goribidnūr	314	103	28	1	60
Bāgepalli	429	128	32	50	44
Chintāmani	256	67	67	...	15
Srīnivāspur	311	82	20	44	16
Total	2,834	865	234	233	273

The cultivated products are similar to those of Bangalore District, but owing to the large number of tanks there is a greater proportion of 'wet' and garden cultivation. The following are the areas, in square miles, occupied by the principal crops in 1903-4: *rāgi*, 430; rice, 96; gram, 83; other food grains, 170; oilseeds, 38; sugar-cane, 18. Potatoes are extensively cultivated in the rich valleys of the Chik Ballāpur and Sidlaghatta *tāluks*. Poppy cultivation, now prohibited, was formerly a source of great profit to the ryots. A little coffee is grown at Nandidroog, and mulberry in the Chik-Ballāpur, Sidlaghatta, and Kolār *tāluks*.

During the twelve years ending 1904 loans for land improvement amounted to Rs. 9,500. For irrigation wells 1·85 lakhs was advanced, and Rs. 8,500 for field embankments.

There are 3 square miles supplied by channels, 171 by tanks and wells, and 60 irrigated from other sources. The number of tanks is 3,861, of which 483 are 'major.'

The area occupied by State forests in 1903-4 was 135 square miles, by 'reserved' lands 80, and by plantations 18. The forest receipts amounted to Rs. 47,000, the principal items being firewood and charcoal.

The gold-mines in the Bowringpet *tāluk* of Kolār District yield nearly all the gold produced in India. There were 11 mines in operation in 1904, the produce for the year being 607,500 ounces, valued at more than 2¼ millions sterling. The prevailing gneissose stone is quarried for building, and for road metal. Near Sidlaghatta is a special kind of laterite. At Rahmān Garh there is an exudation of earth-oil at a certain season.

Trade and communications.

Apart from industries connected with the gold-mines, there is a sugar factory at Goribidnūr, and a good industrial school with workshops at Kolār, belonging to the American Methodist Episcopal Mission. The silk industry is general among Muhammadans in the Kolār, Sidlaghatta, and Chik-Ballāpur *tāluks*. There are reported to be 248 small works for reeling silk, 2,192 looms for cotton cloth, 1,421 for blankets, and 61 for other fibres. Wood-works number 242, iron-works 174, brass and copper 48. There are also 293 oil-mills, and 209 sugar and jaggery mills. Mulbāgal is noted for the excellence of its sugar.

The greatest commercial centres are the Gold Fields, and Bowringpet connected with them. Their large population, both European and native, gives rise to considerable trade. Next to gold, the most valuable articles of export are sugar, sugar-candy, jaggery, and molasses; then cotton cloths and native blankets. Apart from machinery and articles for the gold-mines, the principal imports are salt, ropes, baskets, and paper.

The Bangalore branch of the Madras Railway runs through the District from west to east to Bowringpet, and then south-east, with a length of 56 miles. From Bowringpet the Gold Fields Railway runs for 10 miles east and south through the mining properties. A light railway has been projected from Bangalore to Chik-Ballāpur. The length of Provincial roads is 193 miles, and of District fund roads 385 miles.

Famine.

Since the great famine of 1876-8 scarcity has prevailed on various occasions, as in 1884-5 and 1891-2. In 1896-7 prices of food-grains rose abnormally high, owing to large exports to the neighbouring British Districts where there was widespread distress. Half the assessment on waste 'wet' lands was remitted as a measure of relief. In 1900 test works were started in the Bāgepalli *tāluk*, but the necessity for them soon disappeared. The south-east *tāluks* and Bāgepalli were affected by drought in 1905, the cattle suffering most.

The District is divided into ten *tāluks*: BĀGEPALLI, BOWRINGPET,

CHIK-BALLĀPUR, CHINTĀMANI, GORIBIDNŪR, KOLĀR, MĀLŪR, MULBĀGAL, SIDLAGHATTA, and SRĪNIVĀSPUR. The Deputy-Commissioner is the head of the District, and under him the following three groups of *tāluks*, in charge of Assistant Commissioners, were formed in 1903: Kolār, Chintāmani, and Srīnivāspur, with head-quarters at Kolār; Chik-Ballāpur, Goribidnūr, Bāgepalli, and Sidlaghatta, with head quarters at Chik-Ballāpur; Bowringpet, Mālūr, and Mulbāgal, with head-quarters at Kolār.

Administration.

The District and Subordinate Judge's courts at Bangalore have jurisdiction over Kolār District, and there are Munsifs' courts at Kolār, at the Gold Fields, and at Chik-Ballāpur. The District is comparatively free from serious crime.

The land revenue and total revenue are shown below, in thousands of rupees:—

	1880-1.	1890-1.	1900-1.	1903-4.
Land revenue .	8,63	11,02	13,45	14,16
Total revenue .	9,69	15,47	22,92	24,38

The revenue survey and settlement were introduced in the west and north between 1880 and 1885, and in the east and south between 1887 and 1890. The incidence of land revenue per acre of cultivated area in 1903–4 was Rs. 2-1-11. The average assessment per acre on 'dry' land is Rs. 1–5-5 (maximum scale Rs. 2–12-0, minimum scale Rs. 1-1-0); on 'wet' land, Rs. 5–10–10 (maximum scale Rs. 9, minimum scale Rs. 8); and on garden land, Rs. 5–12-9 (maximum scale Rs. 16, minimum scale Rs. 2).

In 1903-4 there were eleven municipalities—namely, KOLĀR, SIDLAGHATTA, MULBĀGAL, CHIK-BALLĀPUR, Mālūr, Srīnivāspur, Bowringpet, Goribidnūr, Chintāmani, Gudibanda, and Bāgepalli—with a total income of Rs. 54,000 and an expenditure of Rs. 51,000, besides the Special Sanitary Board for the Gold Fields. Outside the areas administered by these, local affairs are managed by the District and *tāluk* boards, which had an income of Rs. 82,000 in 1903-4, chiefly derived from a share of the Local fund cess, and which spent Rs. 75,000, including Rs. 47,000 on roads and buildings.

The special police force for the Gold Fields is described under KOLĀR GOLD FIELDS. Its authority extends over the Mulbāgal, Mālūr, and Bowringpet *tāluks*. The District police includes 2 superior officers, 18 subordinate officers, and 359 constables. There are 12 lock-ups, containing a daily average of 41 prisoners.

In 1901 the percentage of literate persons was 12·2 in the Gold Fields and 4·7 in the District (9·3 males and 0·7 females). The number of schools rose from 358 with 11,101 pupils in 1890-1

to 453 with 13,689 pupils in 1900–1. In 1903–4 there were 413 schools (320 public and 93 private) with 12,046 pupils, of whom 1,853 were girls.

Besides the hospitals at Kolār town and the Gold Fields, there were 7 dispensaries in 1904, in which 126,000 patients were treated, including 875 in-patients, there being 30 beds available for men and 28 for women. The total expenditure was Rs. 38,000.

The number of persons vaccinated in 1904 was 10,110, or 14 per 1,000 of the population.

Kolār Tāluk.—Central *tāluk* of Kolār District, Mysore, lying between 13° 2′ and 13° 18′ N. and 77° 56′ and 78° 17′ E., with an area of 283 square miles. The population in 1901 was 75,648, compared with 72,543 in 1891. The *tāluk* contains one town, KOLĀR (population, 12,210), the head-quarters; and 334 villages. The land revenue demand in 1903–4 was Rs. 1,71,000. The Pālār river runs along the eastern border, while the west is occupied by the Kolār and Vokkaleri hills. The *tāluk* is generally well cultivated, even the table-land on the Kolār hills. There are numerous large tanks and wells, especially in the south. The 'dry-crop' soil is mostly red, mixed with sand. In the north-east is some black soil. Silkworms are reared in many of the villages.

Kolār Gold Fields.—City in the south-east of Kolār District, Mysore State, situated on a branch railway (10 miles long) from Bowringpet, between 12° 50′ and 13° 0′ N. and 78° 18′ and 78° 21′ E., to the east of a low ridge of hills, of which Betarāyan (3,199 feet) is the most conspicuous point. Area, 15 square miles; population (1901), 38,204. In 1891 the population was only 7,085, and the entire city has come into being since 1887.

The existence of gold in this region had long been known, and there are traces of old workings. Mining was attempted, but without success, in the time of Tipū Sultān, and in 1802 Lieut. Warren examined and reported upon this gold tract. In 1873 Mr. M. F. Lavelle obtained from the Mysore government exclusive mining rights for twenty years, and sank a shaft near Urigam in 1875. But finding that large capital was needed for carrying on the work, he transferred his rights in 1876, with the approval of the government, to a syndicate known as the Kolār Concessionaires, to whom 20 square miles were leased for thirty years on more favourable terms. In 1881 the aid was secured of Messrs. John Taylor & Sons, mining engineers in London; and Captain B. D. Plummer, a miner of great experience, commenced operations at the Nundydroog mine. These came to an end for want of funds in 1883, and the outlook for the whole field was of the gloomiest. The Mysore mine still had £13,000 left. On the strong advice of Mr. John Taylor, Captain Plummer was sent out as a forlorn

hope in December, 1883, to do the best he could with this amount. Before long he had the good fortune to discover the Champion lode, and by 1885 the success of the Kolār gold-field had been established. Many changes had meanwhile been made in the terms of leases, which had the effect of both encouraging the industry and giving the State a legitimate share in the profits. The Kolār Gold Fields now yield nearly all the gold produced in India, and some of the mines are among the richest in the world. To the end of 1904 the total value of gold produced was 21 millions sterling, and there had been paid in dividends 9 millions, and in royalty to the Mysore State one million. The nominal capital of the eleven companies at work at the end of 1904 was 2½ millions sterling, valued in the London market at about 9¾ millions. Of these companies, five (Mysore, Champion Reef, Ooregum, Nundydroog, and Balaghat) paid dividends, and five produced gold but paid no dividends. The dividends paid by the first five averaged 74 per cent. on their paid-up capital, but for individual companies it came to 145 per cent. for the first and 169 for the second. The number of persons employed in 1904 was 510 Europeans, 415 Eurasians, and 27,000 natives. The wages paid in the year amounted to 70¾ lakhs or £470,000.

The following improvements have been carried out by the State for the promotion of the Gold Fields. In 1894 was opened the branch railway from Bowringpet junction, passing through the mines. In 1899 a Sanitary Board was formed, composed of three *ex-officio* and four non-official members, the latter nominated by the Mining Board and approved by the State. The Special Magistrate is *ex-officio* president. In 1900 the Gold Fields were formed into a separate police district, together with the Bowringpet, Mālūr, and Mulbāgal *tāluks*. A number of Sikhs and Punjābis have been recruited, and in 1904 the force consisted of a European Superintendent, 50 subordinate officers, and 726 constables. The number of grave crimes reported was 488, of which 70 per cent. were detected. Co-operating with this force, especially for prevention of gold thefts, are also 6 European supervisors, with 315 native watchmen under them, and 4 Punjābi *jemadārs*, with 125 Punjābi watchmen. In the middle of 1902 the Cauvery power scheme commenced supplying electric power to the mines from the Cauvery Falls at Sivasamudram, 92 miles distant. Since August, 1902, there has been uninterrupted transmission of 4,185 horse-power. So satisfactory have been the results that a further supply of 2,500 horse-power, applied for by the mining companies, was installed in 1905, and 2,000 additional to this is being arranged for. The power is also being applied to the working of saw-mills at the mines. A scheme for an efficient water-supply, drawn from the Betmangala tank on the Pālār river, 6 miles to the east, was finished in 1905. The water,

filtered by the Jewel system, is pumped to a reservoir at the new town; and each mine can draw its supply from the main laid through the fields. The State undertakes to supply a million gallons a day to the mines, and an additional half-million if found necessary. Churches, a club, an hotel, large shops, &c., had been erected at various times, but since 1895 the necessity of laying out a new town for the population of the Gold Fields was recognized. Roads and wells were gradually made, and land acquired. In 1901 a final plan was adopted for the town (since named Robertsonpet, after a former Resident), which extends north and south to the east of the Gold Fields. Connected with it are cooly colonies, providing sanitary dwellings for the workpeople. Between the residential and bazar sites has been reserved an open space for a park or public garden.

Kolār Town.—Head-quarters of the District and *tāluk* of Kolār, Mysore, situated in 13° 8′ N. and 78° 8′ E., 11 miles north of Bowringpet railway station. Population (1901), 12,210. Kolār is a place of great antiquity, but little now remains in it that is ancient. The original form of the name was Kuvalāla, contracting to Kolāla. The Gangas from early in the Christian era bore the title 'Lord of Kuvalāla.' The present Kolāramma temple was erected by Rājendra Chola in the beginning of the eleventh century, when the Cholas overthrew the Ganga power. Early in the next century Kolāla was taken by the Hoysala king, who drove the Cholas out of Mysore. When the Hoysala dominions were partitioned for a time in the second half of the thirteenth century, Kolār went with the Tamil districts to Rāmanātha. In the fifteenth century, under Vijayanagar, Tamme Gauda, with the title of Chikka Rāyal, obtained authority to repair the fort. The Sultān of Bijāpur next subdued the place, and in 1639 it was a part of the *jāgīr* given to Shāhjī, father of Sivajī. The Mughals took it fifty years later, and about 1720 Fateh Muhammad, father of Haidar Alī, became Faujdār of Kolār under the Sūbahdār of Sīra. After various fortunes, Kolār was ceded to Haidar Alī in 1761. In 1768 it was taken by the British, in 1770 by the Marāthās, in 1791 again by the British, and at the peace of 1792 restored to Mysore. The Makbara, or tomb of Haidar Alī's father, is one of the principal old buildings, and is maintained by an endowment. The fort walls were levelled some years ago and the ditch was filled up. Many new streets were laid out at the same time. Before the opening of the railway in 1864, Kolār was the great place of passage to and from Madras. Scorpions abound, and a pit under the entrance to the Kolāramma temple is kept full of them. A silver scorpion is one of the customary offerings. Mulberry is grown for the rearing of silkworms. Turkeys are reared in large numbers for export to Bangalore and other European centres. Coarse woollen blankets are woven. The Methodist

Episcopal Mission has an orphanage and industrial school. The municipality dates from 1870. The receipts and expenditure during the ten years ending 1901 averaged Rs. 4,000. In 1903-4 they were Rs. 12,000.

Kolhān.—Government estate in Singhbhūm District, Bengal, lying between 21° 58′ and 22° 43′ N. and 85° 21′ and 86° 3′ E., with an area of 1,955 square miles. The Kolhān is a low plateau, varying in elevation from 750 feet above sea-level in the neighbourhood of Chaibāsa to upwards of 1,000 feet in the south. On the north, east, and south, the country is for the greater part open and gently undulating; it is covered with prosperous villages and is well cultivated, the depressions between the ridges being invariably sown with rice and some portion of the uplands with cereals, pulses, or oilseeds. In the south-east the surface is very rocky and covered with jungle; and in the west and south-west are mountainous tracts thickly covered with jungle and very sparsely inhabited. The villages here are mere hamlets scattered on the hill slopes, and an area of 529 square miles has been formed into forest Reserves.

The majority of the inhabitants are Hos, and British relations with them date from 1820. At that time the tract was a refuge for fugitive offenders from Chotā Nāgpur, and plundering excursions were frequently made by the Hos into the neighbouring territories. They thus became a thorn in the side of the Rājā of Porāhāt and of the other chiefs in the north of Singhbhūm. The British Government, wishing to put an end to the plundering excursions, formed relations with the Rājā of Porāhāt, and assisted him and the Saraikelā and Kharsāwān chiefs in bringing the Hos into submission. The chiefs, however, were unable to keep them in order, and in 1837 the British Government resolved to take their territory under its direct control. Colonel Richards entered the country with a strong force and secured their submission, after which 23 Ho *pīrs* or *parganas* were detached from the control of the Singhbhūm chiefs and 4 from Mayūrbhanj and formed into the Kolhān Government estate. There was no further trouble until 1857, when the Hos joined the mutinous Rājā of Porāhāt, and a long and troublesome campaign took place, which terminated with the surrender of the Rājā in 1859.

The indigenous village system of the Kols, based upon a federal union of villages under a single divisional headman, which is gradually dying out elsewhere in Chotā Nāgpur, still survives in this tract. The whole estate is divided into groups of from 5 to 20 villages. Each village has its own *mundā* or headman, all of whom are subject to the authority of the *mānki* or divisional headman. Every *mundā* is responsible for the payment of the revenue, and for the detection and arrest of criminals in his village, to the *mānki*, who is in his turn

responsible to Government. For acting as revenue collectors, the *mānkis* receive a commission of 10 per cent. and the *mundās* 16 per cent. of the revenue which passes through their hands. Besides these duties, the *mānkis* and *mundās*, each in his degree, have certain informal powers to decide village disputes and questions of tribal usage. Persons other than Hos are not allowed to settle in the estate without the permission of the Deputy-Commissioner. The last settlement was effected in 1897, when the gross rental was fixed at Rs. 1,77,000, subject to a deduction of Rs. 49,000 on account of commission to *mānkis*, *mundās*, and *tahsīldārs* (as the village accountants are here called). A uniform rate of 12 annas per acre was charged for embanked rice cultivation, and 2 annas for uplands. New *dikkus* or non-Hos were assessed at double these rates. Of the total area, 525 square miles were cultivated, 450 square miles were cultivable, and 219 square miles uncultivable waste; 212 square miles were 'protected' forest, 529 square miles 'reserved' forest, and 20 square miles *lākhirāj* or revenue free. Chaibāsa, the head-quarters of Singhbhūm District, which lies within the estate, is assessed under a separate settlement.

[J. A. Craven, *Final Report on the Settlement of the Kolhān Government Estate* (Calcutta, 1898).]

Kolhāpur.—Town in Amraotī District, Berār. *See* KHOLĀPUR.

Kolhāpur State (or Karavira, or Karvir).—State in the Kolhāpur and Southern Marāthā Political Agency, Bombay, lying between 15° 50′ and 17° 11′ N. and 73° 43′ and 74° 44′ E.[1], with an area of 3,165 square miles. It is bounded on the north by the river Vārna, which separates it from the District of Sātāra; on the north-east by the river Kistna, separating it from Sāngli, Mirāj, and Kurandvād; on the east and south by the District of Belgaum; and on the west by the Western Ghāts, which divide it from Sāvantvādi on the south-west and Ratnāgiri on the west. Kolhāpur comprises portions of the two old Hindu divisions of MAHĀRĀSHTRA and CARNATIC, a distinction which is still marked in the language of the people, part of whom speak Marāthī and the remainder Kanarese.

Subordinate to Kolhāpur are nine feudatories, of which the following five are important: Vishālgarh, Bāvda, Kāgal (senior), Kāpsi, and Ichalkaranjī. The general statistics of all of these are shown in the table on the next page.

Physical aspects.

Stretching from the heart of the Western Ghāts eastwards into the plain of the Deccan, Kolhāpur includes tracts of widely different character and appearance. In the west, along the spurs of the main chain, are situated wild and picturesque hill slopes and valleys, producing timber, myrabolams, &c., and covered with forests. The central belt, which is open

[1] These spherical values do not include certain outlying tracts, like Torgal.

and fertile in parts, is crossed by several lines of low hills running east and west at right angles to the main range. Farther east, the land becomes more open, and presents the unpicturesque uniformity of a well-cultivated and treeless plain, broken only by an occasional river. Among the western hills are perched the forts of Panhāla, Vishālgarh, Bāvda, Bhūdhargarh, and Rāngna, ancient strongholds of the Kolhāpur chieftains. The State is watered by eight streams of considerable size; but though navigable during the rainy months by trading boats of 2 tons, none is so large that it cannot be forded in the hot season. The only lake of any importance is that of Rankāla, near the city of Kolhāpur. It has lately been improved at a considerable cost. Its circumference is about 3 miles, and its mean depth 33 feet. Except in the south, where there are some ridges of sandstone and quartzite belonging to the Kalādgi (Cuddapah) formation, Kolhāpur comes within the area of the great Deccan trap fields.

Subdivisions and Feudatories.	Area in square miles.	Villages.	Population 1901.	Revenue, in thousands of rupees, 1903-4.
Kolhāpur Proper.				
Petha Kārvīr	311	142	164,351	Not available
Petha Panhāla, including Chandwad *mahāl*	468	202	113,085	
Petha Alte	219	49	113,585	
Petha Shirol, including Rāybāg *mahāl*	328	64	88,828	
Gad-Hinglaj, including Katkol *mahāl*	487	166	124,342	
Petha Bhūdhargarh	489	193	94,761	
Total	2,302	816	698,952	43,91
Feudatory Jāgīrs.				
Vishālgarh	235	66	35,258	2,02
Bāvda	243	99	41,400	1,44
Kāpsi	32	10	13,754	60
Kāgal Senior	112	40	49,233	3,26
Kāgal Junior	...	...	...	67
Ichalkaranjī	241	48	68,414	3,29
Torgal	...	...	...	44
Himmat Bahādur	...	...	...	85
Sarlashkar Bahādur	...	...	...	69
Total	863	263	211,059	13,26
Grand total	3,165	1,079	910,011	57,17

The chief trees are the *ain*, *nana*, *hirda*, *kinjal*, *jāmbul*, and *bābul*: minor products are bamboos, myrabolams, and grass. Tigers and leopards are found in the hills. Bison, bears, and wild dogs are occasionally met with.

At an elevation of about 1,800 feet above the sea, Kolhāpur enjoys on the whole a temperate climate. In the west, with its heavy rainfall

and timber-covered hills and valleys, the air keeps cool throughout the year; but in the dry tracts below the hills, suffocating easterly winds prevail from April to June. During the hot months the hill forts, rising about 1,000 feet above the plain, afford a pleasant retreat. The annual rainfall is heaviest at Bāvda, where it reaches 207 inches, and least at Shirol, where it is only 21 inches. Kolhāpur and Ajra record an average fall of 38 and 77 inches. Plague first appeared in the State in 1897, and caused more than 62,000 deaths by the end of 1903-4.

History.

The members of a branch of the Silāhāra family, which was settled above the Western Ghāts, possessed the territory lying round Kolhāpur and in the north-west of Belgaum District from about the end of the tenth century to early in the thirteenth century. About 1212 the country passed to the Deogiri Yādavas. The ancient Hindu dynasty was subverted by the Bahmani kings of the Deccan, and the country afterwards came under the rule of Bijāpur. In 1659 Sivajī obtained possession of the forts which, though taken and retaken many times, finally remained with the Marāthās on the death of Aurangzeb.

The present Rājās of Kolhāpur trace their descent from Rājā Rām, a younger son of Sivajī, the founder of the Marāthā power. After the death of Rājā Rām in 1700, his widow placed her son Sivajī in power at Kolhāpur. But in 1707, when Shāhū, the son of Sambhājī, Sivajī's elder son, was released from captivity, he claimed the sovereignty over all the possessions of his grandfather and fixed his capital at SATĀRA. Disputes between the two branches of the family continued for several years, till in 1730 a treaty was concluded, under the terms of which the younger branch agreed to yield precedence to Shāhū, and to abandon all claims to the country north of the Vārna and east of the Kistna, and Shāhū of the elder branch recognized Kolhāpur as an independent principality. On the death of Rājā Rām's younger son in 1760, the direct line of Sivajī became extinct; and a member of the family of the Bhonslas was adopted under the name of Sivajī III. The prevalence of piracy from the Kolhāpur port of Mālvān compelled the Bombay Government to send expeditions against Kolhāpur in 1765, and again in 1792, when the Rājā agreed to give compensation for the losses which British merchants had sustained since 1785, and to permit the establishment of factories at Mālvān and Kolhāpur. Internal dissensions and wars with the neighbouring States of the Patvardhans, Sāvantvādi, and Nipāni, gradually weakened the power of Kolhāpur. In 1812 a treaty was concluded with the British Government, by which, in return for the cession of certain forts, the Kolhāpur chief was guaranteed against the attacks of foreign powers; while on his part he engaged to abstain from hostilities with other States, and to refer all disputes to the arbitration of the British Government.

During the war with the Peshwā in 1817, the Rājā of Kolhāpur sided with the British. In reward, the tracts of Chikodi and Manoli, formerly wrested from him by the chief of Nipāni, were restored. But these tracts did not long remain a part of the State. They were resumed by the British Government in 1829, owing to the serious misconduct of the Rājā. Shāhājī, *alias* Bāva Sāhib, who came to the throne in 1822, had proved a quarrelsome and profligate ruler; and, in consequence of his aggressions between 1822 and 1829, the British were three times obliged to move a force against him. On his death in 1837 a council of regency was formed to govern during the minority of Sivajī IV. Quarrels arose among the members of this council, and the consequent anarchy led to the appointment by the British Government of a minister of its own. The efforts, however, which he made to reform the administration gave rise to a general rebellion, which extended to the neighbouring State of Sāvantvādi. After the suppression of this rising all the forts were dismantled, and the system of hereditary garrisons was abolished. The military force of the State was disbanded and replaced by a local corps. In 1862 a treaty was concluded with Sivaji IV, who was bound in all matters of importance to be guided by the advice of the British Government. In 1866, on his death-bed, Sivajī was allowed to adopt a successor in his sister's son, Rājā Rām. In 1870 Rājā Rām proceeded on a tour in Europe, and, while on his return journey to India, died at Florence on November 30, 1870. Sivajī Mahārājā Chhatrapati V succeeded Rājā Rām by adoption. In 1882 he became insane, and Government was compelled to appoint a council of regency, headed by the chief of Kāgal as regent. Sivajī V died on December 25, 1883, and having no issue, was succeeded by adoption by Jaswant Rao, *alias* Bābā Sāhib, under the name of Shāhājī, who still rules. The Mahārājā of Kolhāpur holds a patent authorizing adoption, and succession follows the rule of primogeniture. He is entitled to a salute of 19 guns.

Population.

The population of Kolhāpur and its feudatories was 804,103 in 1872, 800,189 in 1881, 903,131 in 1891, and 910,011 in 1901, residing in 9 towns and 1,070 villages. The towns are KOLHĀPUR (population, 54,373), the capital, ICHALKARANJĪ (12,920), SHIROL (7,864), KĀGAL (7,688), GAD-HINGLAJ (6,373), WADGAON (5,168), Hatkalangda (3,680), Katkol (4,562), and Malkāpur (3,307). The density is 319 persons per square mile. About 90 per cent. are Hindus; and of the remainder, 38,533 are Musalmāns, 50,924 Jains, and 2,517 Christians. The chief Hindu castes are Brāhmans (33,000), of whom two-thirds are Deshasths (22,000), while Konkanasths number 5,000. Marāthās (432,000) form the majority of the Hindu population, and are largely cultivators, describing themselves as Kunbīs. The Dhangar or shepherd caste numbers 36,000, mostly nomads. Lingāyats, who are chiefly found in the south, number

79,000, largely traders and shopkeepers. Mahārs (74,000), Māngs (17,000), and Sutārs or carpenters (15,000) are the remaining castes of numerical importance. Kolhāpur is remarkable for the large number of Jain cultivators (36,000), who are evidence of the former predominance of the Jain religion in the Southern Marāthā country. They are a peaceable and industrious peasantry. The Musalmāns chiefly describe themselves as Shaikhs (31,000). Native Christians numbered 2,462 in 1901; and of these 1,087 were Roman Catholics, 1,048 Protestants, and 100 Presbyterians. Nearly 71 per cent. of the total population are supported by agriculture, while 13 per cent. belong to the industrial classes.

Agriculture, &c.

The soil is of four kinds: namely, *kāli* or black, *tāmbdi* or red, *mali* or *malav*, the alluvial land, and *khāri* or *pāndhari* or white. Of these, the black and red soils are the most valuable. About one-third of the arable area is good soil yielding garden crops; but the remainder is mediocre, or, in the hilly parts, poor. Of the 2,354 square miles of cultivable land, 2,019 square miles have been brought under cultivation. In 1903–4 the area actually cultivated was 1,591 square miles, the remaining 428 square miles being current fallows. *Jowār* occupied 470 square miles, rice 262, *nāchni* 171, and *bājra* 108 square miles. Other crops are sugar-cane, tobacco, cotton, chillies, *kusumba*, and ground-nuts. A few coffee and cardamom plantations yield a small out-turn. Irrigation is rare, and is carried on chiefly from wells or pools dug in stream beds. The area of 'reserved' forest is 341 square miles, while 182 square miles are protected; the forest products are teak, sandal, black-wood, myrabolams, grass, and honey. The hollows of rocks and decayed trees contain the comb of the *pova* bee, which is highly esteemed.

Iron ore of three varieties is found in Kolhāpur territory. It is most plentiful in Vishālgarh, Panhāla, Bhūdargarh, and Kolhāpur proper, near the main range of the Western Ghāts. In these places it is generally found near the surface, in laterite. Formerly the smelting of iron was an industry of some importance; but, owing to the cost of manual labour, the increased price of fuel, and the low rates of freight from England, the Kolhāpur metal cannot compete with that imported from Europe. Stone is the only other mineral product of the State. There are several good quarries, especially one in a place known as JOTIBA'S HILL, with a fine-grained basalt, that takes a polish like marble.

Rosha oil is manufactured in the State. Other manufactures are pottery, hardware, coarse cotton, woollen cloth, felt, liquor, perfumes, and lac and glass ornaments. Coarse sugar, tobacco, cotton, and grain are the chief exports; and refined sugar, spices, coco-nuts, piece-goods, silk, salt, and sulphur are the principal imports. The most noteworthy centres of

Trade and communications.

local trade with permanent markets are Kolhāpur city, Shāhupur, Wadgaon, Ichalkaranjī, and Kāgal. The Southern Mahratta Railway passes through the State, being connected with Kolhāpur city by a branch opened in 1891, the property of the State. Six principal lines of road pass through Kolhāpur territory, the most important being that from Poona to Belgaum, which crosses the State from north to south. The total number of post offices is 42, of which 9 are situated in the feudatory *jāgīrs*.

Famine.

Kolhāpur, with its good rainfall and rich land, is less liable to famine than the adjacent Deccan Districts. Distress occurred in the years 1876–7, 1891–2, 1896–7, and 1899–1900, and relief measures were necessary on each occasion. The highest daily attendance of persons in receipt of relief was 164,344 in 1876–7, 6,200 in 1891–2, 61,616 in 1896–7, and 7,000 in 1899–1900. About 3 lakhs were spent on relief in 1876–7, Rs. 40,000 in 1891–2, 7 lakhs in 1896–7, and Rs. 51,000 in 1899–1900.

Administration.

The nine feudatory estates are administered by their holders. Kolhāpur proper is divided into six *pethas* or *tālukas* and three *mahāls*, and is managed by the Mahārājā with the advice of the Political Agent, Kolhāpur and Southern Marāthā Jāgīrs.

The Mahārājā exercises full powers in criminal and civil matters, including the power of life and death; but he cannot try British subjects for capital offences without the permission of the Political Agent. The State contains 64 criminal courts with varying powers from Sessions Judge to third-class magistrate. The feudatory chiefs have in most cases power to imprison up to seven years and the civil powers of a District Judge. During their minority, their *kārbhāris* exercise jurisdiction as magistrates and sub-judges. The commonest forms of crime are theft and hurt.

There are municipalities at KOLHĀPUR, Narsobā Vādi, ICHALKARANJĪ, Wadgaon, Hatkalangda, SHIROL, GAD-HINGLAJ, Katkol, and Malkāpur. The income of the Kolhāpur municipality exceeds Rs. 60,000, while that of the remaining eight amounts in all to about Rs. 23,000. The Kolhāpur municipality was suspended in 1904, owing to maladministration.

The land revenue administration is controlled by an officer styled the Chief Revenue Officer, corresponding to the Commissioner of a British Division. The Kolhāpur land tenures belong to three main classes, namely, alienated or *ināmi*, State or *sheri*, and personal or *ryotwāri*. Of these, the alienated are subdivided into personal, religious, and political grants, and grants for non-military service, most of the alienations having been made between 1618 and 1838. State or *sheri* lands are the Mahārājā's personal holdings, and are managed by the revenue officers, who let them to the highest bidder for a term of years. The

chief varieties of the *ryotwāri* tenure are: the *mirāsi*, under which the payment of a fixed rental prevented the holder from eviction; the *upri*, under which land can be given to a fresh holder after one or two years; the *chāl khand*, under which the holder pays a little more or less than the fixed rate; and the *vatani*, under which hereditary village officers hold lands for less than the usual assessment. The survey settlement, first introduced in 1886, is at present under revision. The assessment rates per acre in force are: 'dry crop,' from R. 1 to Rs. 4-4; rice land, from Rs. 5-1 to Rs. 10; garden land, from Rs. 8 to Rs. 10. The revision survey up to the end of 1903 enhanced the total assessment by Rs. 91,771, or 11½ per cent.

The Kolhāpur State proper had in 1903-4 a revenue of 44 lakhs, chiefly derived from land (12 lakhs), excise (1¾ lakhs), and Local funds (1½ lakhs). The expenditure amounted to 43 lakhs, of which nearly 3 lakhs was devoted to the Mahārājā's private expenses, 3 lakhs was spent on public works, and 2 on the military department. The revenue of the *jāgīrs* is given in the table on p. 381. Opium, excise, and salt are under the control of the State. Since 1839, when the Kolhāpur mint was abolished, the British rupee has been the only current coin.

The Mahārājā maintains a military force of 710 men. The strength of the police is 873 men, maintained at a cost of Rs. 80,000. The Central jail at Kolhāpur had an average daily population of 243 in 1903-4, the cost per prisoner being Rs. 74. There are seventeen subordinate jails.

Of the total population 4 per cent. (7·7 males and 0·2 females) could read and write in 1901. Excluding a few missionary institutions, there were 250 schools in 1903-4, including a college, a high school, and a technical school. The total number of pupils on the rolls was 8,823, and the expenditure on education was about 1⅕ lakhs. The State possesses 15 libraries, of which the largest is in Kolhāpur city, and 8 local newspapers. It also contains a hospital and 15 dispensaries, which treated nearly 168,000 patients in 1903-4, a lunatic asylum with 18 patients, and a leper asylum with 93 inmates. In the same year 21,000 persons were vaccinated.

Kolhāpur City (or Karavira, or Karvir).—Capital of Kolhāpur State, Bombay, situated in 16° 42′ N. and 74° 16′ E., opposite a gap in the Western Ghāts; terminus of the Kolhāpur State Railway, which joins the Southern Mahratta Railway at Mirāj. Population (1901), 54,373. Hindus number 47,140, Muhammadans 5,311, Jains 1,401, and Christians 511. Much has recently been done to improve the sanitation of the city and to adorn it with handsome edifices. Some of the new public buildings challenge comparison with the most successful efforts of modern Indian architecture. Among them may be mentioned the college, the high school, the technical school, the hospital, and

a dispensary. The municipality, which has recently been suspended for maladministration, had an income in 1903–4 of nearly Rs. 63,000. The expenditure in the same year was Rs. 56,000, of which nearly Rs. 37,000 was devoted to lighting and conservancy and Rs. 6,400 to public works.

Kolhāpur has long been held in high esteem for the antiquity of its sacred shrines; and all current legends state that the present capital originally existed as a purely religious settlement, of which the great temple dedicated to the goddess Mahālakshmi remains to mark the site. The cloisters formerly surrounding this great temple now lie buried many feet under the surface of the earth, which appears to have undergone at no distant period a serious convulsion. The extreme antiquity of Kolhāpur is borne out by the numerous Buddhist remains that have been discovered in the immediate neighbourhood, notably a crystal relic casket found in a large *stūpa*, about 1880, bearing on its lid an inscription in Asoka characters of the third century B.C. Small temples are frequently brought to light by excavations. It is believed that Karavira is the older and more important capital of the State, and that the transfer of the political capital from Karavira to the originally religious settlement of Kolhāpur was probably necessitated by some convulsion of nature, of which there are so many evidences in the neighbourhood of Kolhāpur. The ancient Karavira is now a petty village on the north side of Kolhāpur city.

Kolkai (*Korkhei, Kolkhei, Kolchoi*).—Village in the *tāluk* of Srīvaikuntam, in Tinnevelly District, Madras, situated in 8° 40′ N. and 78° 5′ E., 12 miles east of Srīvaikuntam town. Population (1901), 2,518. Tradition asserts that it was the earliest seat of Dravidian civilization, and the spot where CHERA, CHOLA, and PĀNDYA, the legendary progenitors of the three famous South Indian dynasties, ruled in common before the two first founded kingdoms of their own in the west and north. It eventually became the capital of the Pāndyan line, and was known to the early European geographers as one of the most important trading marts in India. It is mentioned by the author of the *Periplus* (A.D. 80) as a celebrated place for pearl-fishing, and is also referred to by Ptolemy (130). The sea gradually retired from Kolkai, owing to the deposit of the silt of the Tāmbraparni on the shore in front, and in consequence a new emporium (KĀYAL) arose between Kolkai and the sea. This in its turn met with a similar fate, and is now a small village 5 miles inland. Further interesting particulars about Kolkai are given in Bishop Caldwell's *History of Tinnevelly*.

Kolis.—The various tribes that bear this name differ very greatly in character and origin. They are chiefly found in the Bombay Presidency, throughout Gujarāt, and in the northern parts of the Deccan and Konkan, and also in the States of Hyderābād, Rājputāna, and

Central India. In the Punjab and United Provinces large numbers of Korīs or Kolīs are found, who are chiefly weavers or labourers. It is doubtful whether these are connected in any way with the Kolīs of Western and Central India. At the Bombay Census of 1901 1,714,921 persons returned themselves as Kolīs, and many of the castes that bear other names have a strain of Kolī blood; whereas in Western Gujarāt the Kolīs have so strong an infusion of northern blood as to be scarcely distinguishable from Rājputs. In the east of Gujarāt no very clear line can be drawn between them and the BHĪLS; and in the Konkan the Kolī passes into the Kunbī by insensible gradations. No satisfactory history or derivation of the name Kolī has yet been given. The *Kolas* or *Kohsarpas* of Sanskrit epic poetry are probably the Kols of the eastern Vindhyas, and the *Kaulika* of the Panchatantra is a weaver like the Korīs of Northern India. The name Kolī does not seem to occur before the Musalmān period, and is disliked by the tribe in Rājputāna and Northern Gujarāt. These facts lend colour to the suggestion that it is derived from the Turkī word *kuleh*, a 'slave.' But, whatever be the origin of the name, it seems probable that the oldest element in the caste represents the aborigines of the open country and the coast, as distinguished from the primitive tribes of the hills and forests.

In Gujarāt there are four leading divisions of Kolīs, which do not as a rule eat together or intermarry. Of these, the highest and most widely spread are the Talabdas, also called Dhārālas, who not infrequently intermarry with Rājputs, and are reputed peaceable and skilful husbandmen. Next to them come the Chunvāliyās of Viramgām, whose leaders are sometimes recognized as Rājputs, while the rank and file differ but little from Bhīls. Though now mostly settled, they were known down to 1825 as daring plunderers. The Khānts also differ little from Bhīls, and had their first home in Rewā Kāntha, whence a large body was transported to Girnār in the fourteenth century. The Pātanvādiyas of the district round Old Anhilvāda are looked down upon by the other sections because they eat buffalo meat, and closely resemble Bhīls and Vāghris. The strain of northern blood is strongest in Kāthiāwār, where the Kolīs differ hardly at all from the Bābriās, Mers, Rāvalias, and Māhiyās, and join in the worship of the Baloch goddess Hinglāj. There is a functional sub-caste of Kolī fishers and boatmen, settled all along the coasts of Kāthiāwār and Gujarāt, which is sometimes classed as separate from, and sometimes as a subdivision of, the Māchhis or the Khārvās. All these sections of Kolīs are subdivided into exogamous clans, many of which bear Rājput names. Gujarāt Kolīs eat fish, flesh, and opium, drink liquor, and smoke tobacco. They worship chiefly the gods Indra and Hātmal and the goddesses Hinglāj and Khodiār, and the river Mahī, and have a strong

belief in ghosts and omens. Children are not married before twelve years of age. Marriages are arranged by the parents, who pay great respect to certain omens. Widows may remarry, and so may un-widowed wives with the first husband's consent. In some parts marriage of a widow with her husband's younger brother is not uncommon. Divorce is allowed. The dead, except infants, are burnt, and on the eleventh day after death worship is paid to a stone into which the ghost is supposed to have entered.

The Marāthī-speaking Kolīs of the Konkan and Deccan also have four endogamous divisions. Of these the Son Kolīs are confined to the coast tract, and are fishermen and sailors. They are closely connected with the Agrīs, and have a *sar pātel* or chief headman who lives at Alībāg. The men affect a cap of red cloth scalloped over the forehead, and the married women wear glass bangles on the left arm only, those of the right arm being thrown into the sea at marriage to save the husband from the dangers of the deep. The Malhāri Kunam or Pānbhari Kolīs are found in large numbers in Thāna District, where they are husbandmen, and more sparsely in the Deccan, where they are boatmen, water-carriers, and ministers in the temples of Mahādeo. They eat with Kunbīs, from whom in the Konkan they can hardly be distinguished. The Rāj, Dongari, or Mahādeo Kolīs claim to have come about 1300 from the Nizām's country, where they are strong. The chief of Jawhār in Thāna belongs to this section, which is more warlike than the others, and has often made itself notorious for turbulence and gang-robberies. Above the Ghāts their chief centre was formerly at Junnar. They are now as a rule husbandmen. The Dhor Kolīs are looked down upon by the other sections because they eat beef, and are altogether of a lower type. Each of the three higher sections is divided into a number of exogamous family stocks (*kūl*). They claim descent from the sage Vālmiki, who composed the Rāmāyana. Infant marriage is practised chiefly by the Rāj Kolīs. All sections allow the remarriage of widows, but only at night, and with maimed rites. A widow must marry out of her first husband's *kūl*. Divorce is allowed only by Raj Kolīs. All sections worship various forms of Siva, and in the Konkan also the local gods and ghosts known as Hirvā, Chitā. Vāghdeo, &c., with offerings of fowls, goats, and liquor. They believe firmly in witchcraft and omens. The marriage rites are conducted by Brāhmans. The dead, except in cases of cholera, are burnt, but the Rāj Kolīs sometimes bury, and employ *rāvals* in the funeral rites. Offerings are made to the dead from eleven to thirteen days after death, and yearly in the month of Bhādrapada.

In Central India the Kolīs are almost entirely confined to the Mālwā side. They live as a rule by agriculture and differ little from the

ordinary Kunbī. The Census of 1901 shows the following distribution of the tribe throughout India:

Bombay	1,714,921
Baroda	281,326
Hyderābād	230,598
Central India	32,268
Rājputāna	103,060
Other Provinces	57,301
Total	2,419,474

Kollaimalais.—Hill range in the Nāmakkal and Atūr *tāluks* of Salem District, Madras, lying between 11° 10′ and 11° 27′ N. and 78° 18′ and 78° 30′ E. Unlike the Shevaroys, the Kollaimalais rise abruptly from the plains, and present the appearance of a flat-topped mass of mountain. But far from being a level plateau, the upper surface is cut up by numerous deep and narrow valleys, which render the scenery all along the 17 miles of its length variegated and picturesque. From the bold crag which rises on the north to a height of over 4,000 feet and overlooks the fertile plains of Atūr, the eye travels over long, gently-sloping, sheltered glades down its north-east flank, and rests on the concentric terraces of vivid green in the basin below. Farther south, across ridges whose sides are furrowed by deep ravines, by grassy meadows dotted with the glossy jack and the tall sago, along rocky passes and narrow defiles and wooded glens, is seen the great gorge which opens from the central basin towards the Turaiyūr valley, and at its head the shrine in Valapurnād where Arapileswaran presides over the clear waters of the Aiyār before they descend precipitously into the low country at Puliyanjolai. Near the high ridge at the southern extremity, commanding a vast view of the Cauvery in the foreground, and of the distant Anaimalais and the Palnis beyond, are the ruins of an old bungalow, testifying to the evil reputation for malaria which the Kollaimalais have long (perhaps not altogether deservedly) enjoyed among European settlers. The population of the hills consists chiefly of the same Malaiyālis who are found on the Shevaroys, the Pachaimalais, and the Kalrāyans. They cultivate considerable areas, but have ruined the forests, which were formerly of value, by promiscuous felling.

Kollangod.—Town in the Pālghāt *tāluk* of Malabar District, Madras, situated in 10° 37′ N. and 76° 41′ E. Population (1901), 9,800. It is the residence of the Nambidi of Kollangod, a landed proprietor who owns estates in the NELLIAMPATHI and ANAIMALAI HILLS; and it has a high school maintained by the Nambidi, and a weekly market. About 2 miles to the south is a large Hindu temple known by the name of Kachankurichi. Since the opening of the coffee estates in the Kollangod and Nelliampathi Hills the trade of the place has improved.

Kollegāl Tāluk.—Northern subdivision and *tāluk* of Coimbatore District, Madras, lying between 11° 46′ and 12° 18′ N. and 76° 59′ and 77° 47′ E., with an area of 1,076 square miles. The Cauvery river bounds it on three sides, forming at its north-west angle the famous Sivasamudram island and Falls. The population in 1901 was 96,563, compared with 88,533 in 1891. There are 122 villages, and only one town, KOLLEGĀL (population, 13,729), the head-quarters. The demand for land revenue and cesses in 1903-4 amounted to Rs. 1,16,000. Kollegāl is the most sparsely peopled *tāluk* in the District, its population, which is mainly Kanarese as in the adjoining State of Mysore, numbering only 90 persons per square mile, while the average for the District is 280. Unlike the rest of Coimbatore, Kollegāl benefits considerably from the south-west monsoon, and its annual rainfall (35 inches) is the heaviest in the District. The southernmost spurs of the Eastern Ghāts run through it, forming on the west a well-marked minor range called the Biligiri-Rangan hills; and it is on a higher level than the remainder of the District and really forms part of the adjoining Mysore plateau, the climate and temperature of which it shares. More than half of the *tāluk* consists of 'reserved' forest; but this is chiefly useful as a grazing ground for cattle, for the Kollegāl ryot is more often a raiser of stock than a cultivator of arable land. The well-known Alambādi breed of draught-cattle comes from here.

Kollegāl Town.—Head-quarters of the *tāluk* of the same name in Coimbatore District, Madras, situated in 12° 10′ N. and 77° 7′ E., in the extreme north-west corner of the District. Population (1901), 13,729. It is well-known for its gold-laced cloths and kerchiefs. Some of the silk cloths made here cost as much as Rs. 300 each, or even more, according to the quantity and quality of the gold and silver embroidery, which, in the highest priced cloths, is woven in intricate and elegant designs into the texture of the cloth while still on the loom.

Kollern.—Lake in Kistna District, Madras. *See* COLAIR.

Komulmair.—Fort in Udaipur State, Rajputāna. *See* KUMBHALGARH.

Konārak.—Ruined temple in the head-quarters subdivision of Purī District, Bengal, situated in 19° 53′ N. and 86° 6′ E., about 1½ miles from the sea and 21 miles east of Purī town. The temple was built and dedicated to the Sun-god by Narasingha Deva I of the Ganga dynasty of Orissa, who ruled from 1238 to 1264. Konākona appears to have been the ancient name, and the modern name thus stands for Konārka, meaning 'the *arka* (Sun-god) at Kona.' It consisted of a tower, probably a little over 180 feet in height, and of a porch or *mandap* in front of it, about 140 feet high. The principal gate was to the east, and was flanked by the figures of two lions, mounted upon elephants. The northern and southern gates were sculptured with the

figures of two elephants, each lifting up a man with his trunk, and of two horses, richly caparisoned and led by warriors. Each gate was faced by exquisite chlorite carvings, of which those of the eastern gate are still in perfect preservation. Above this gate was an enormous chlorite slab, bearing the figures of the nine planets, which is now lying a little distance from the temple and has become an object of local worship; and above this slab there was originally a statue of the Sun-god, seated cross-legged in a niche. Along the plinth are eight wheels and seven horses, carved in the stone, the temple being represented as the car of the Sun-god drawn by his seven chargers. East of the *mandap*, or porch, stands a fine square building with four pillars inside, which evidently was used as a dancing-hall, as the carvings on its walls all represent dancing-girls and musicians. The wall of the courtyard measures about 500 by 300 feet; and it originally contained a number of smaller shrines and out-houses, of which only the remains can now be traced. The entire courtyard till recently was filled with sand; but since 1902 Government has carried on systematic excavations, which have brought to light many hidden parts of the temple itself and of other structures. The great tower of the temple collapsed long ago, and at the present day forms a huge heap of débris west of the porch; but it is believed that about one-third of it will be found intact below the broken stones, as soon as they have been removed. In order to preserve the porch, it has been filled up with broken stones and sand, and is now entirely closed from view; its interior was plain and of little interest. In spite of its ruinous state, the temple still forms one of the most glorious examples of Hindu architecture. Even the fact that many of the carvings around its walls are repulsive to European notions of decency cannot detract from the beauty of an edifice of which Abul Fazl said that 'even those whose judgement is critical and who are difficult to please, stood astonished at its sight.'

[Rājendralāla Mitra, *The Antiquities of Orissa* (Calcutta, 1875, 1880); and the *Reports of the Archaeological Survey of India for* 1902-3 *and* 1903-4 (Calcutta, 1904, 1906).]

Kondalwādi.—Head-quarters of the *paigāh tāluk* of Kotgīr in Nizāmābād District, Hyderābād State, situated in 18° 48′ N. and 77° 46′ E., 28 miles north-west of Nizāmābād and 9 miles west of the confluence of the Godāvari and Mānjra rivers. Population (1901), 6,557.

Kondāne.—Village in the Karjat *taluka* of Kolāba District, Bombay, situated in 18° 49′ N. and 73° 24′ E., about 4 miles south-east of Karjat on the south-eastern line of the Great Indian Peninsula Railway, and at the base of Rājmāchi hill. Population (1901), 158. Kondāne has a group of early Buddhist caves (250 B.C.–A.D. 100) of considerable interest. There are four caves, including the *chaitya* or

shrine; and an inscription on one of them, attributed to the second century B.C., runs: 'Made by Balaka, the pupil of Kanha (Krishna).' The caves are fully described in the Thāna District Gazetteer.

Kondapalli.—Town and hill-fortress in the Bezwāda *tāluk* of Kistna District, Madras, situated in 16° 37′ N. and 80° 33′ E. Population (1901), 4,799. The place is now unimportant, but was formerly a fortress of considerable strength and the capital of one of the five Northern Circārs. Built about A.D. 1360 by the Reddi kings of Kondavīd, it became the centre of numerous struggles. It was taken by the Bahmani Sultān in 1471 from the Orissa kings, and in 1477 from a revolted garrison. Falling once more into the hands of the Orissa kings, it was again captured by Krishna Deva of Vijayanagar about 1515, and by Sultān Kuli Kutb Shāh in 1531. It surrendered to the troops of Aurangzeb in 1687, and in 1766 was taken by General Caillaud from the Nizām. A small British garrison was stationed here till 1859. The ruined outworks, some miles in circumference, are now overgrown with jungle or covered with corn-fields; but the citadel on the rock overhanging them is still a striking object. At Kondapalli there is a special industry—the manufacture of small figures and toys from a light wood which grows on the hills.

Kondavīd.—Village and hill-fortress in the Narasaraopet *tāluk* of Guntūr District, Madras, situated in 16° 16′ N. and 80° 16′ E. Population (1901), 1,979. It was once the capital of a province of the same name extending from the Kistna river to the Gundlakamma. The fortress, constructed in the twelfth century, was a seat of the Reddi dynasty from 1328 to 1482. It was taken by Krishna Deva Rāya of Vijayanagar about 1516, and by the Sultāns of Golconda in 1531, 1536, and 1579. The Musalmāns called it Murtazanagar. The French obtained the province in 1752, and it passed to the English in 1788. The fortifications, erected upon the crests of a small range of hills, are extensive and strongly built with large stones. They are many miles in circumference and in a fair state of preservation. A description of them will be found in the *Indian Antiquary*, vol. i, p. 182. The interior of the fort, which is overgrown with thick jungle, contains the ruins of numerous storehouses and magazines. The hill, the highest point of which is 1,701 feet above the sea, was once used as a sanitarium by the officers at Guntūr.

Kondkā.—Native State in Central Provinces. *See* CHHUĪKHADĀN.

Kongnoli.—Village in the Chikodi *tāluka* of Belgaum District, Bombay, situated in 16° 33′ N. and 74° 20′ E., on the Belgaum-Kolhāpur road, in the extreme north-west corner of the District. Population (1901), 5,597. The village has a large trade, sending rice to Belgaum and various places in Kolhāpur, and importing cloth, dates, salt, spices, and sugar. A weekly market takes place on Thursday, when cotton

yarn, grain, molasses, tobacco, and from 2,000 to 3,000 cattle are disposed of. Weaving of women's *sārīs*, waist-cloths, and inferior blankets are the only industries. Paper for packing purposes and for envelopes was manufactured to a large extent before the famine of 1876–7, but during the famine the paper-makers deserted the village. It contains a boys' school with 90 pupils.

Konkan.—A name now applied to the tract of country below the Western Ghāts south of the Damangangā river, including Bombay, the Districts of Thāna, Kolāba, Ratnāgiri, the coast strip of North Kānara, the Native States of Janjīra, Sāvantvādi, and the Portuguese territory of Goa, with an area of 3,907 square miles. Population (1901), 5,610,432. The term 'Konkan' seems to be of Dravidian origin, but has not so far been satisfactorily explained. The language of the Konkan was probably, at a remote period, Kanarese, but is now mainly Marāthī. Mention is made of the people of the Konkan in the Mahābhārata, Harivamsa, and Vishnu Purāna, as well as in the work of Varāha Mihira, the geographer of the sixth century, and in the Chālukya inscriptions of the seventh century. The tract is found referred to under the name of Aparānta in the third century B.C. and the second century A.D. Late Sanskrit works apply the name Konkan to the whole western coast of India from about Trimbak to Cape Comorin, and mention seven divisions, the names of which are variously given, but Konkan proper is always one of these and seems to have included the country about Chiplūn. The Konkan does not seem at any time to have been a political unit. The Arab geographers of the ninth to the fourteenth century were familiar with it in its present signification. In history it appears either as a number of petty states or as part of a larger whole as in the early days of Marāthā power, when the *Konkan Ghāt Mātha*, or 'spurs of the Ghāts,' were linked with such territory in the Deccan as from time to time came into the possession of Sivajī and his successors.

The coast strip of the Konkan is a fertile and generally level tract, watered by hill streams and at parts intersected by tidal backwaters, but has nowhere any great rivers. A luxuriant vegetation of palms rises along the coast, the coco-nut plantations being an important source of wealth to the villagers. In the southern portions the Ghāts forming the eastern boundary are covered with splendid forest. The crops are abundant; and owing to the monsoon rainfall being precipitated upon the Ghāts behind, the Konkan is exempt from drought or famine. The common language is a dialect of Marāthī known as Konkanī, in which a Dravidian element is traceable.

The history of the Konkan can best be gathered from a perusal of the historical portions of the articles on the included States and Districts. The earliest dynasty which can be connected with this tract is

that of the Mauryas, three centuries before Christ; but the only evidence of the connexion rests on an Asoka inscription discovered at the town of Sopāra in Thāna District. The principal dynasties that succeeded were the following, in their order, so far as order is ascertainable: the Andhras or Sātavāhanas, with their capital at Paithan in the Deccan; the Mauryas, of Purī; the Chālukyas; the Rāshtrakūtas; the Silāhāras, whose capital was perhaps the island of Elephanta in Bombay harbour; the Yādavas, with their capital at Deogiri, the modern Daulatābād; the Muhammadans (Khiljīs, Bahmanis, Bijāpur and Ahmadābād kings, and Mughals); Portuguese (over a limited area); Marāthās; and British. The Konkan coast was known to the Greeks and Romans, and Ptolemy (A.D. 150) and the author of the *Periplus* (247) afford evidence that Greek traders from Egypt dealt with the Konkan ports.

The arrival of the Bani-Israil and the Pārsīs from the Persian Gulf are important incidents in Konkan history. The Bani-Israil, in whom some trace the descendants of the lost tribes, are now scattered over the Bombay Presidency, but mostly in the North Konkan. The descendants of the first Pārsīs, who landed in Thāna about the seventh century, now crowd the streets and markets of Bombay, engross a large part of the city's wealth and principal trading operations, and have their agents in all important provincial towns.

The Portuguese reached Malabar in 1498. In 1510 Goa was seized, and soon afterwards Chaul and Bassein became the headquarters of their naval dominion. During the sixteenth century the Portuguese shared the rule of the Konkan with the Muhammadan kings of Ahmadnagar and Bijāpur. The rise and fall of the pirate power of the Angriās, who from 1700 to 1756 harassed English, Dutch, and native shipping alike, mark a disastrous period of Konkan history. In the seventeenth and early part of the eighteenth century the Konkan had an unenviable notoriety on account of these pirates, who were known as the 'Malabars,' and infested the numerous creeks and harbours. The strongholds of these marauders are still to be seen on the coast. Their chief ports were Revadanda, Suvarndrug, and Gheria or Vijayadrug.

Since the British administration was established in 1818 on the overthrow of the Peshwā, the peace of the whole area, if some disturbances in Sāvantvādi in 1844 and 1850 be excepted, has remained unbroken.

Konnūr (the *Kondanuru* of inscriptions).—Village in the Gokāk *tāluka* of Belgaum District, Bombay, situated in 16° 11′ N. and 74° 45′ E., on the Ghatprabha river, about 5 miles north-west of Gokāk. Population (1901), 5,667. It contains a boys' school with

81 pupils. Near the Gokāk Falls on the Ghatprabha, within the limits of Konnūr village, are several ruined temples of about the eleventh century. To the south, close to the foot of some sandstone hills, are a number of the slab-walled and slab-roofed cell-tombs or kistvaens which have been found near Hyderābād in the Deccan and in other parts of Southern India, and which have a special interest from their likeness to the old stone chambers in England. The most interesting feature is a group of fifty more or less perfect rooms. All the stone slabs used as walls and roofs are of the neighbouring quartzite sandstone. They show no signs of tooling, but seem to have been roughly broken into shape. The cell or kistvaen is formed of six slabs of flat unhewn stone. From an opening in the south face a small passage is usually carried at right angles to the chamber. Over each cell-tomb a cairn of small stones and earth seems originally to have been piled, probably forming a semi-spherical or domed mound about 8 feet high. In almost every case remains of these mounds or covers are seen. Many of the chambers are ruined, and of some only a few stones are left, the large slabs having probably been taken for building. Some of the better-preserved chambers were surrounded by a square rough-hewn stone kerb, which in some instances is in fair order. This kerb was probably a plinth on which the covering mound rested, which in some cases seems to have been carefully built of rough stone boulders set in mud. An examination of the magnetic bearing of the axes of these chambers showed that of forty-eight chambers in the main group the axes of ten pointed due north, of thirty-two pointed west of north, in one case as much as 34° west, but most were much nearer north than west. The remaining six pointed east of north, one as much as 27° east and the rest only a few degrees east. The people call these erections 'Pāndavas' houses,' and say the Pāndavas built them as shelters. The complete or almost complete weathering away of the mounds of earth and stones which originally covered these burial-rooms shows that they must be of great age. As *konne* is the Kanarese for 'room' and *uru* for 'village,' it seems probable that the village takes its name from its cell-tombs or burial-rooms, and that Konnūr means 'the room-village.' One of the most perfect tombs contained fragments of a human tooth and bones, and some pieces of pottery.

Konrh.—*Tahsīl* in Mirzāpur District, United Provinces. *See* KORH.

Kooshtea.—Subdivision and town in Nadiā District, Bengal. *See* KUSHTIA.

Kopāganj.—Town in the Ghosī *tahsīl* of Azamgarh District, United Provinces, situated in 26° 1′ N. and 83° 34′ E., on the metalled road from Ghāzīpur to Gorakhpur, and also connected by road with Azamgarh town. It is a junction on the Bengal and North-Western Railway from Gorakhpur to Benares, at which branches converge from

Dohrīghāt and from Balliā. Population (1901), 7,039. The town was founded on an ancient site by Irādat Khān, Rājā of Azamgarh, about 1745; but a Hindu inscription on a small Hindu temple is dated as early as 1472. It is administered under Act XX of 1856, with an income of about Rs. 1,300. It contains a small saltpetre refinery, and cotton cloth is woven, employing 500 looms. The finest products are turbans, woven with silk borders. There is also some trade in sugar and grain. The town has two schools, with 156 pupils.

Kopargaon. — *Tāluka* of Ahmadnagar District, Bombay, lying between 19° 35′ and 19° 59′ N. and 74° 15′ and 74° 45′ E., with an area of 519 square miles. It contains one town, PUNTĀMBA (population, 5,890), and 122 villages. The head-quarters are at Kopargaon. The population in 1901 was 73,539, compared with 89,339 in 1891. The decrease is attributed to famine and consequent migration. The density, 142 persons per square mile, is slightly above the District average. The demand for land revenue in 1903–4 was 2·4 lakhs, and for cesses Rs. 14,000. The Godāvari river enters at the extreme north-west corner, traverses the *tāluka*, and forms for a short distance the eastern boundary. The bed of the river is considerably below the general level of the country, and the high black-soil and clay banks are deeply fissured by numerous minor streams. Kopargaon consists of a black-soil plain, having a gentle slope from both sides towards the Godāvari. In most of the villages the people are dependent on wells for their water-supply, as all but the largest tributaries of the Godāvari run dry shortly after the monsoon rains have ceased. The cultivators are in an impoverished condition, attributable in a great measure to the frequent occurrence of bad seasons. Sudden and violent showers, which deluge the country, are often succeeded by a long and continued drought.

Kopili.—River in Nowgong District, Eastern Bengal and Assam. *See* KAPILI.

Koppa.—Western *tāluk* of Kadūr District, Mysore, including the Yedehalli *sub-tāluk* and the Sringeri *jagīr*, and lying between 13° 15′ and 13° 46′ N. and 75° 5′ and 75° 45′ E., with an area of 701 square miles. The population in 1901 was 55,483, compared with 62,343 in 1891. The *tāluk* contains three towns, SRINGERI (population, 2,430), Yedehalli (2,266), and Koppa (1,018), the head-quarters; and 427 villages. The land revenue demand in 1903–4 was Rs. 1,85,000. Koppa is bounded on the west by the Western Ghāts. The Tunga flows through the west, and the Bhadra forms the eastern boundary. The whole is purely Malnād, full of grand and picturesque scenery. It is a network of lofty hills and sunken valleys, the former densely covered with forests, which shelter a continuous belt of coffee plantations, formed by Europeans in the last thirty years, the latter occupied

by steeply terraced rice flats and areca gardens. The annual rainfall averages 120 inches. The most open part is the Sringeri valley. Cardamoms are valuable products on the Ghāts. There is not much 'dry' cultivation. Rice is the staple 'wet crop,' nourished by the rainfall, and sugar-cane is much grown around Dānivāsa in the north-east. Conspicuous among the mountains is the superb Merti peak (5,451 feet). The Sringeri *math*, founded in the eighth century by Sankarāchārya, lies in the west, and is the chief seat of the Smārta Brāhmans. At Bālehalli in the east is one of the principal *maths* of the Lingāyats.

Koppal.—Old hill-fort and town in Raichūr District, Hyderābād State, situated in 15° 21′ N. and 76° 10′ E., on the Southern Mahratta Railway. Population (1901), 8,903. It was occupied by Tīpu Sultān in 1786, who had the lower fortress rebuilt by his French engineers. It was besieged by the British and the Nizām's forces for six months in 1790, before it was finally carried. During the Mutiny of 1857, Bhīm Rao, a rebel, obtained possession of it, but was slain with many others of his party, and the rest surrendered. The fortifications consist of two forts; the upper fort is situated on the lofty and insulated summit of a hill, and is 400 feet above the plains. Sir John Malcolm described it as the strongest place he had seen in India. It is now the chief town in a *jāgīr* of Sir Sālār Jang's family, and contains a State post office and a vernacular school maintained by the estate.

Korā.—Ancient town in the Khajuhā *tahsīl* of Fatehpur District, United Provinces, situated in 26° 7′ N. and 80° 22′ E., on the old Mughal road from Agra to Allahābād, 29 miles west of Fatehpur town. Population (1901), 2,806. The town was for centuries held by the Gautam Rājās of Argal, and became the head-quarters of a province under the Muhammadans. In Akbar's time it was the capital of a *sarkār* in the *Sūbah* of Allahābād. It still contains many old and substantial houses, but most of them are ruinous and desolate in appearance. A massive and handsome *bāradarī* in a large garden surrounded by high walls and a magnificent tank are the chief relics of native rule, and these were constructed late in the eighteenth century. Separated from Korā by the Mughal road stands another town, called Jahānābād, which is more flourishing and contains 4,379 inhabitants. Jahānābād is administered under Act XX of 1856, with an income of about Rs. 900. A school in Jahānābād has 110 pupils, and a smaller school in Korā 23.

Korābar.—Estate and head-quarters thereof in Udaipur State, Rājputāna. *See* KURĀBAR.

Korangi.—Village in Godāvari District, Madras. *See* CORINGA.

Korapula.—River in Malabar District, Madras, 32 miles long, but shallow and of small commercial importance. It forms the boundary

between North and South Malabar, a division still of importance in the social organization of the country. A Nāyar woman of North Malabar may not cross it.

Koraput Subdivision.—Subdivision of Vizagapatam District, Madras, consisting of the *zamīndāri tahsīls* of KORAPUT, NOWRANGAPUR, JEYPORE, POTTANGI, MALKANGIRI, and PADWA, which are all in the Agency tract.

Koraput Tahsīl.—Agency *tahsīl* in Vizagapatam District, Madras, lying above the Ghāts, with an area of 671 square miles. The population in 1901 was 73,818 (chiefly hill tribes), compared with 74,476 in 1891. They live in 611 villages. The head-quarters of the *tahsīl* are at KORAPUT VILLAGE. The country is hilly but extensively cultivated, most of the forest having been destroyed. It belongs to the Rājā of the Jeypore estate.

Koraput Village.—Head-quarters of the *tahsīl* of the same name in Vizagapatam District, Madras, situated in 18° 48′ N. and 82° 44′ E. It is the head-quarters of the Koraput subdivision, and the residence of the Special Assistant Agent and the Superintendent of police, Jeypore, as well as of several German missionaries. Population (1901), 1,560. There is a police reserve here, besides the usual head-quarters offices and buildings.

Koratla.—Town in the Jagtial *tāluk* of Karīmnagar District, Hyderābād State, situated in 18° 49′ N. and 78° 43′ E. Population (1901), 5,524. Paper of a coarse texture is made here, which is largely used by the *patwāris* for their account books.

Koreā.—Tributary State in the Central Provinces, lying between 22° 56′ and 23° 48′ N. and 81° 56′ and 82° 47′ E., with an area of 1,631[1] square miles. Till 1905 it was included in the Chotā Nāgpur States of Bengal. It is bounded on the north by Rewah State; on the east by Surgujā; on the south by Bilāspur District; and on the west by the States of Chāng Bhakār and Rewah. It consists of an elevated table-land of coarse sandstone, from which spring several abruptly scarped plateaux, varying in height and irregularly distributed over the surface. The general level of the lower table-land is about 1,800 feet above the sea. On the east this rises abruptly into the Sonhāt plateau, with an elevation of 2,477 feet. The north of the State is occupied by a still higher table-land, with a maximum elevation of 3,367 feet. In the west a group of hills culminates in the DEOGARH PEAK (3,370 feet), the highest point in Koreā. The lofty Sonhāt plateau forms the watershed of streams which flow in three different directions: on the west to the river Gopath, which has its source in one of the ridges of the Deogarh peak and divides Koreā from Chāng Bhakār; on the north-

[1] This figure, which differs from the area shown in the *Census Report* of 1901, was supplied by the Surveyor-General.

east to the Son; while the streams of the southern slopes feed the Heshto or Hasdo, the largest river of Koreā, which runs nearly north and south throughout the State into Bilāspur District and eventually falls into the Mahānadī. Its course is rocky throughout, and there is a fine waterfall near Kirwāhi. In the past tigers and wild elephants used to commit serious depredations and caused the desertion of many small villages, but their numbers have been considerably reduced. Bison, wild buffaloes, *sāmbar* (*Cervus unicolor*), *nīlgai* (*Boselaphus tragocamelus*), 'ravine deer' (*Gazella bennetti*), hog deer, mouse deer, and bears are common.

The State was ceded to the British Government in 1818. In early times there had been some indefinite feudal relations with the State of Surgujā, but these were ignored by the British Government. The chief's family call themselves Chauhān Rājputs, and profess to trace back their descent to a chief of the Chauhān clan who conquered Koreā several centuries ago. The direct line became extinct in 1897, and the present chief, Rājā Seo Mangal Singh Deo, belongs to a collateral branch of the family. The country is very wild and barren, and is inhabited mainly by migratory aborigines; the population decreased from 36,240 in 1891 to 35,113 in 1901, the density being only 22 persons per square mile. The State contains 250 villages, one of which, Sonhāt, lying at the foot of the Sonhāt plateau and on its northern edge, is the residence of the chief. On the highest table-land, which stretches for nearly 40 miles to the borders of Chāng Bhakār, there are only 37 hamlets inhabited by Cheros, who practise *jhūming* and also carry on a little plough cultivation on their homestead lands. Hindus number 24,430 and Animists 10,395. There are 10,000 Gonds; and Goālās, Kaurs, and Rajwārs number 3,000 each. The people are almost entirely dependent on agriculture for a livelihood, but the aboriginal tribes are accustomed to supplement the meagre produce of their fields with various edible fruits and roots from the jungles.

Koreā contains extensive forests consisting chiefly of *sāl* (*Shorea robusta*), and bamboos are also abundant. Some forests in the western part, which lie near the Bengal-Nāgpur Railway, have been leased to timber merchants; but in the remainder of the State the forests contain no trees of any commercial value. The minor jungle products include lac and *khair* (*Acacia Catechu*), besides several drugs and edible roots. In the forests there is good pasturage, which is used extensively by cattle-breeders from the Rewah State and elsewhere, on payment of certain fixed rates. Iron is found everywhere, but mineral rights belong to the British Government. Traders from Mirzāpur, Bilāspur, and Benares import sugar, tobacco, molasses, spices, salt, and cloths, and export stick-lac, resin, rice, and other food grains. The State contains

footpaths but no regular roads, and trade is carried on by means of pack-bullocks.

The relations of the chief with the British Government are regulated by a *sanad* granted in 1899, and reissued in 1905 with a few verbal changes due to the transfer of the State to the Central Provinces. Under this *sanad* the chief was formally recognized and permitted to administer his territory subject to prescribed conditions, and the tribute was fixed for a further period of twenty years, at the end of which it is liable to revision. The chief is under the general control of the Commissioner of Chhattīsgarh as regards all important matters of administration, including the settlement and collection of land revenue, the imposition of taxes, the administration of justice, arrangements connected with excise, salt, and opium, and disputes in which other States are concerned. He cannot levy import and export duties or transit dues, unless they are specially authorized by the Chief Commissioner; and he has no right to the produce of gold, silver, diamond, or coal mines in the State or to any minerals underground, which are the property of the British Government. He is permitted to levy rents and certain other customary dues from his subjects, and is empowered to pass sentences of imprisonment up to five years and of fine to the extent of Rs. 200; but sentences of imprisonment for more than two years and of fine exceeding Rs. 50 require the confirmation of the Commissioner. Heinous offences calling for heavier punishment are dealt with by the Political Agent, Chhattīsgarh Feudatories, who exercises the powers of a District Magistrate and Assistant Sessions Judge; the Commissioner occupies the position of a Sessions Court in respect of such cases, while the functions of a High Court are performed by the Chief Commissioner.

The total revenue of the State from all sources in 1904–5 was Rs. 18,500, of which Rs. 6,600 was derived from land and Rs. 5,000 from forests. The total expenditure in the same year was Rs. 17,350, including Rs. 3,300 spent on administration and Rs. 8,660 on domestic charges. The tribute to the British Government is Rs. 500 per annum. The *zamindārs* hold immediately under the chief and pay annual rents, which in most cases are fixed permanently, besides certain cesses. The cultivators have no permanent rights in their land, but are allowed to hold it as long as they pay their rents and cesses and render customary service (*begār*) to the State. Besides the village *chaukīdārs* and *goraits*, who are remunerated in kind or hold grants of land, there is a salaried police force of 3 officers and 10 men. The State maintains a small jail with accommodation for 7 prisoners, in which prisoners sentenced to imprisonment for two years or less are confined. There is no school in the whole State, and in 1901 only 84 persons of the total population could read and write. Up to the

present no dispensary has been established; 2,260 persons were successfully vaccinated in 1904–5.

Koregaon Tāluka.—*Tāluka* of Sātāra District, Bombay, lying between 17° 28′ and 18° 1′ N. and 74° and 74° 18′ E., with an area of 346 square miles. It contains 74 villages, including RAHIMATPUR (population, 6,735). The head-quarters are at Koregaon. The population in 1901 was 83,375, compared with 92,254 in 1891. The density, 241 persons per square mile, is nearly equal to the District average. The demand for land revenue in 1903–4 was 2·2 lakhs, and for cesses Rs. 19,000. The country is comparatively flat in the south, but everywhere slopes gently from the hills. The eastern portion is generally raised and more barren. The climate is healthy, but the rainfall, which measures 30 inches annually at Koregaon, is precarious.

Koregaon Village. Village in the Sirūr *tāluka* of Poona District, Bombay, situated in 18° 39′ N. and 74° 4′ E., on the right bank of the Bhīma, 16 miles north-east of Poona city. Population (1901), 689. This was the scene of the last of the three battles in the neighbourhood, which led to the collapse of the Peshwā's power, fought on January 1, 1818. Captain Staunton, on his march to strengthen Colonel Burr, arrived at Koregaon in the morning after a fatiguing night march with a detachment of 500 Bombay native infantry, 300 irregular horse, and 2 six-pounders manned by 24 Madras artillerymen. He found the whole army of the Peshwā, some 20,000 strong, encamped on the opposite bank of the Bhīma river. The Marāthā troops, mostly Arabs, were immediately sent across against the exhausted handful of soldiers, destitute of both provisions and water. The engagement was kept up throughout the day, and resulted in the discomfiture and retreat of the Marāthās. The remarkable feature of this engagement was that the British troops were all natives, without any European support, excepting the 24 artillerymen, of whom 20 were killed and wounded. Of 7 officers engaged, 4 were killed and 1 wounded; total casualties, 276 killed, wounded, and missing. This gallant fight is now commemorated by a stone obelisk. Koregaon contains a small school with 32 boys.

Korh (or Bhadohī).—North-western *tahsīl* of Mirzāpur District, United Provinces, conterminous with the Bhadohī *pargana*, lying between 25° 9′ and 25° 32′ N. and 82° 14′ and 82° 45′ E., with an area of 396 square miles. Population fell from 291,218 in 1891 to 285,240 in 1901, the rate of decrease being the lowest in the District. There are 1,076 villages and one town, Gopīganj (population, 4,005). The demand for land revenue in 1903–4 was Rs. 1,73,000, and for cesses Rs. 12,000. Korh lies entirely north of the Ganges and is very thickly populated, the density being 720 persons per square mile. Its northern boundary is formed by the Barnā river. The *tahsīl* forms part of the BENARES ESTATE, and is a uniform plain, highly cultivated and well

wooded, with but little waste or jungle. The area under cultivation in 1903–4 was 250 square miles, of which 112 were irrigated, almost entirely from wells.

Korkū.—A primitive tribe in the Central Provinces. Out of 140,000 Korkūs enumerated in India in 1901, nearly 100,000 belonged to the Central Provinces and the remainder to Berār and Central India. They dwell almost exclusively on the west of the Sātpurā range in the Districts of Hoshangābād, Nimār, and Betūl. The word Korkū simply signifies 'men' or 'tribesmen,' *kor* meaning 'man' and *kū* being a plural termination. The Korkūs have been identified with the Korwās of Chotā Nāgpur, and it is not improbable that they are an offshoot of this tribe, who have a legend giving the Mahādeo or Pachmarhī hills as their original home. The Rāj Korkūs now claim to be descended from Rājputs, and say they came from Dhārānagar, the modern Ujjain, whence their ancestors were led to the Pachmarhī hills in the pursuit of a *sāmbar* stag. This legend is of the usual Brāhmanical type, and has no importance.

They have four endogamous divisions: the Mowāsis and Bāwariās in a higher rank, and the Rūmas and Bondoyās in a lower one. The Mowāsis and Bāwariās are Rāj Korkūs occupying the status of cultivators, and Brāhmans will take water from them. The term Mowāsi means a resident of Mowās, the name given to the western Sātpurā Hills by the Marāthās, and signifying the 'troubled country,' a reminiscence of the time when the Korkūs were notorious robbers and freebooters. Bāwariā means a resident of Bhowargarh, in Betūl. Each division has thirty-six exogamous septs, which are mainly named after trees and animals, and are totemistic. The Korkūs have generally forgotten the meaning of the sept names, and pay no reverence to their totems, except in one or two cases.

Ten of the septs consider the regular marriage of girls inauspicious, and simply give away their daughters without the performance of any ceremony. Among the others, several formalities precede the marriage ceremony. A proposal for marriage is in the first place made by the father of the boy to the father of the girl, and the latter is bound by etiquette to continue refusing the suggested alliance for a period varying from six months to two years, and averaging about a year. The father always receives a sum of about Rs. 50 for the loss of his daughter's services; and if the girl is once betrothed, the payment is due even should she die before marriage. Before the wedding procession starts, the bridegroom and his elder brother's wife are made to stand on a blanket together and embrace each other seven times. This is possibly a survival of the old custom of fraternal polyandry still existing among the KHONDS. The bridegroom receives a knife or a dagger with a lemon spiked on the blade to scare away evil spirits,

and the party then proceeds outside the village, where the boy and his parents sit under a *ber*-tree (*Zizyphus Jujuba*). The Bhumkā or caste priest ties all three with a thread to the tree, to which a chicken is then offered in the name of the sun and moon, whom the Korkūs consider to be their ultimate ancestors. On reaching the bride's village the progress of the wedding procession is barred by a leathern rope stretched across the road by the bride's relatives, who have to receive a bribe of two pice each before it is allowed to pass. The marriage is completed by an imitation of the *bhānwar* ceremony or walking round the sacred pole.

After death, ceremonies must be performed in order to cause the soul of the deceased person to take up its residence with the ancestors of the tribe, who are supposed to pass a colourless existence in a village of their own. Corpses are buried, two pice being thrown into the grave to buy the site. No mourning is observed, but some days after death the members of the family repair to the burial-place carrying with them a piece of turmeric. This is sliced up and put into a leaf cup and water poured over it. A piece is then laid on the tomb, and the remainder brought back tied up in a cloth, and placed under the main beam of the house which is the dwelling-place of the ancestors. A second ceremony called the *sedoli* may be performed at any time within fifteen years. Each sept has a separate place for its performance, where a stake called *munda* is set up for every one whose rites are separately performed, while in the case of poor families one stake does for several persons. On the stake are carved images of the sun and moon, a spider and a human ear, and a figure representing the principal person in whose honour it is put up, on horseback, with weapons in his hand. For the performance of the ceremony the stake is taken to the house, and the pieces of turmeric previously tied up are untied, and they and the post are besmeared with the blood of a sacrificial goat. After the stake has been placed in the ground, the pieces of turmeric are carried to a river, made into a ball, and allowed to sink, the Korkūs saying, 'Ancestors, find your home.' If the ball does not sink at once, they consider that it is due to the difficulty experienced by the ancestors in the selection of a house, and throw in two pice to assist them. After this ceremony the spirits of the ancestors are laid, but before its performance they may return at any time to vex the living.

The Korkūs generally call themselves Hindus, and profess veneration for Mahādeo, of whose shrine in the Pachmarhī hills two Korkū land-owners are hereditary guardians. They also worship a number of tribal deities, among whom may be mentioned Dongar Deo, the god of the hills: Muthā or Mutwā Deo, the general deity of disease, who is represented by a heap of stones outside the village; Kunwar Deo,

the god who presides over the growth of children; and others. They have caste priests called Bhumkās, who are members of the tribe; the office is sometimes but not necessarily hereditary, and if it be vacant a new Bhumkā is chosen by lot. The Bhumkā performs the usual functions and has special powers for the control of tigers.

The Korkūs are well-built and muscular, slightly taller than the Gonds, a shade darker, and a good deal dirtier. They are in great request as farm-servants, owing to their honesty and simplicity. They are as a rule very poor, and wear even less clothing than the Gonds, and where the two tribes are found together the Gonds are more civilized and have the best land.

The tribe have a language of their own, called after them Korkū, which belongs to the Mundā family. It was returned by 88,000 persons in 1901, of whom 59,000 belonged to the Central Provinces. The number of Korkū speakers is 59 per cent. of the total of the tribe, and has greatly decreased during the last decade.

Korwai (*Kurwai*).—A mediatized chiefship directly dependent on the British Government, in Central India, under the Bhopāl Agency, lying between 24° 1′ and 24° 14′ N. and 78° 2′ and 78° 9′ E., with an area of about 111 square miles. It is bounded by the Central Provinces on the north and east, and by parts of Gwalior State on the remaining sides. It is situated on the edge of the Mālwā plateau, partly in the Bundelkhand gneiss area. The Betwā flows through its western section.

In 1713 Muhammad Diler Khān, an Afghān adventurer from Tīrāh, belonging to the Fīroz Khel, seized Korwai and some of the surrounding villages. Later, in return for certain services, he obtained a grant of 31 *parganas* from the emperor. During the decline of the Mughal empire the State was equal in extent to Bhopāl, if not larger; but during the Marāthā period it rapidly declined, although it has always remained independent, the assistance rendered by the chief to Colonel Goddard in 1778 especially marking it out as an object of Marāthā persecution. In 1818 the Nawāb was hard pressed, and applied to the Political Agent at Bhopāl for aid against Sindhia, which was granted. In 1820, after the establishment of British supremacy, the State was seized by Akbar Khān, an illegitimate son of the previous ruler. Irādat Muhammad Khān, the rightful heir, applied for assistance to the British Government; but it was not considered advisable to disturb arrangements which existed previous to the establishment of our supremacy, and Irādat Khān received a pension on abandoning his claims. Muhammad Yākūb Alī Khān succeeded in 1895, and died in 1906. He was succeeded by Sarwar Alī Khān, the present Nawāb.

The population was: (1881) 24,631, (1891) 21,787, and (1901) 13,634, giving a density of 122 persons per square mile. The decrease

of 37 per cent. during the last decade is due mainly to the famine of 1899–1900. Hindus number 11,285, or 83 per cent.; and Musalmāns, 1,824. The State contains 85 villages. The Mālwī dialect of Rājasthānī is the prevailing form of speech. Agriculture supports 43 per cent. of the population, and general labour 9 per cent.

About 23 square miles, or 16 per cent. of the total area, are cultivated, of which only 93 acres are irrigated; 78 square miles are cultivable but uncultivated; 11 square miles are forest; and the rest is waste. Of the cropped area, *jowār* occupies 9 square miles, gram 6, wheat 2, and maize 456 acres.

Two metalled roads in the State have been constructed by the British Government, one to Kethora and the other to Bamora stations on the Great Indian Peninsula Railway.

The chief exercises the powers of a magistrate of the first class, cases beyond his powers being tried by the Political Agent. The British Indian codes are used in the courts. The control of the finances is entirely in the hands of the Political Agent. The total revenue is Rs. 37,000, of which Rs. 23,000 is derived from land and Rs. 2,200 from customs. The incidence of the land revenue demand is Rs. 1–9 per acre of cultivated land.

The capital is Korwai, situated on the right bank of the Betwā. Population (1901), 2,256. A fort built of the gneiss rock which abounds in the neighbourhood stands on a small hill to the east of the town; the houses are also for the most part built of this material and roofed with big slabs. Korwai contains a British post office and a hospital.

Kosala (from *kushala*, 'happy').—Two tracts of this name are known in Hindu literature. That north of the Vindhyas corresponded roughly to Oudh. In the Rāmāyana it is the country of Dasaratha and Rāma, with its capital at Ajodhyā, and it then extended to the Ganges. It was part of the holy land of Buddhism, and in Buddhist literature kings of Kosala ruled also over Kapilavastu. Srāvastī, the site of which is disputed, was the capital of Uttara Kosala, the northern portion, over which Lava, son of Rāma, ruled after his father's death. Southern or Great Kosala (Dakshina or Mahā Kosala), which fell to Kusa, the other son of Rāma, lay south of the Vindhyas. In the seventh century Hiuen Tsiang describes it as bounded by Ujjain on the north, Mahārāshtra on the west, Orissa on the east, and Andhra and Kalinga on the south. It thus lay in Chhattīsgarh about the upper valley of the Mahānadī and its tributaries, from Amarkantak on the north to Kānker on the south, and may at times have extended west into Mandlā and Bālāghāt Districts, and east into Sambalpur. From about the year 1000 the tract was absorbed in a new kingdom called Chedi (eastern).

[For Northern Kosala, see Lassen, *Ind. Alt.*, vol. i, p. 129, and authorities quoted there; Rhys Davids's *Buddhist India*, passim. For Southern Kosala, see Cunningham, *Archaeological Survey Reports*, vol. xvii, p. 68, and map; and *Coins of Mediaeval India*, p. 73.]

Kosam.—The name of two villages, distinguished as Kosam Inām and Kosam Khirāj, in the Manjhanpur *tahsīl* of Allahābād District, United Provinces, situated in 25° 20′ N. and 81° 24′ E., on the bank of the Jumna. Population (1901), 2,374. For many years the ancient remains buried beneath these villages were believed to be the site of the city of Kausāmbhī, one of the most celebrated cities of ancient India to both Hindu and Buddhist. If the distances recorded by Hiuen Tsiang are correct, Kausāmbhī must be looked for at some distance south or south-west of Kosam, and the most recent writer has located it at Gūrgī in the State of Rewah. The remains at Kosam include those of a vast fortress with earthen ramparts and bastions, four miles in circuit, with an average height of 30 to 35 feet above the general level of the country. Near the centre is a small modern Jain temple, and a large collection of Jain sculptures of the eleventh century were dug up close by. A large stone monolith stands at an angle in a mound of brick ruins, bearing inscriptions by pilgrims dating from the fifth or sixth century. An inscription, dated in 1564, mentions the name of Kausāmbhī. Numerous terra-cotta figures, stone carvings, and coins are found in the neighbourhood, the latter ranging over the whole period of Indian numismatics. One variety of coins found here bears the names of a series of kings who appear to have reigned in the first or second century B.C. Three miles north-west of the fort stands a rocky hill called Pabhosā, high on the face of which is a cave where important inscriptions have been found.

[Cunningham, *Archaeological Reports*, vol. i, pp. 301–12; vol. x, pp. 1–5; vol. xxi, pp. 1–3; *Coins of Ancient India*, p. 73; Major Vost, *Journal, Royal Asiatic Society*, 1903, p. 583.]

Kosgi.—Head-quarters of the estate of the same name belonging to Sir Sālār Jang's family, in Gulbarga District, Hyderābād State, situated in 16° 59′ N. and 77° 43′ E. Population (1901), 8,228. The town contains a dispensary, a police station, a school with 50 pupils, all maintained by the estate, and three private schools with 140 pupils. Silk and cotton *sārīs* are extensively made here, there being 1,500 looms at work.

Kosi (or Kūsi).—River of Nepāl and North Bengal, rising among the eastern Nepāl Himālayas (26° 27′ N. and 87° 6′ E.), in the country known as the Sapt Kosikī, or 'country of the seven Kosis,' of which the most important and best known is the San Kosi. It first takes a south-westerly course for about 60 miles, then flows south and south-east for 160 more, during which it receives on its left bank its two great

tributaries, the Aran and Tāmbar. It leaves the mountains at Chatrā in 26° 44′ N. and 87° 6′ E., in a series of cataracts and rapids, and after a southerly course touches upon British territory in the extreme north-east of Bhāgalpur District, in 26° 35′ N. and 87° 5′ E., at which point it is a large river nearly a mile wide. It here assumes the character of a deltaic stream, and runs south with many bifurcations and interlacings, till, after receiving another considerable tributary, the Ghugri, on its left bank, it finally falls into the Ganges in 25° 22′ N. and 87° 17′ E., in Purnea District, after a course within Bengal of about 84 miles.

According to Hindu legend, this river is Kausikī, the daughter of Kusik Rājā, king of Gadhī. Although the daughter of a Kshattriya, she was the wife of a Brāhman; and, on giving birth to a son who preferred the warlike exploits of his mother's race to the sacred duties of his father's, she became a river.

The Kosi is notorious, even among Bengal rivers, for its vagaries, and remarkable for the rapidity of its stream, the dangerous and uncertain nature of its bed, and the desolation caused by its floods. Tracts inundated by it lapse into sand and jungle, and in this way it has made a wilderness of about half the Madhipurā subdivision of Bhāgalpur. In the early part of the eighteenth century the river passed below Purnea town, but it has since worked westwards, across about 50 miles of country, as indicated by now deserted channels. The Kosi carries a small amount of boat traffic in the lower half of its course through Purnea; but navigation is at all times of the year a matter of much difficulty, as the channels are constantly changing, new ones being yearly opened up and old ones choked by sandbanks, while the bed is full of sunken trees or snags. Moreover, owing to the great velocity of the current, boats have frequently to wait several days for a favourable wind to drive them up some of the reaches, and they require a pilot to precede them and select the channel to be followed. The Kosi has recently been spanned by a fine railway bridge near Katihār, and is also crossed higher up by a ferry from Anchrā Ghāt to Khanwā Ghāt on the west bank, both of which connect the Bengal and North-Western Railway with the Bihār section of the Eastern Bengal State Railway.

Kosī.—Town in the Chhāta *tahsīl* of Muttra District, United Provinces, situated in 27° 48′ N. and 77° 26′ E., on the Agra-Delhi road. Population (1901), 9,565. It contains a fine *sarai* ascribed to Khwāja Itibār Khān, governor under Akbar. During the Mutiny the District officials took refuge at Kosī for a time, but were compelled to flee by the defection of the Bharatpur force. There is a dispensary, and the Baptist Mission has a station here. The town lies low, and is surrounded by hollows containing stagnant water which had most

injurious effects on the health of the inhabitants. A main drain has now been constructed. Kosī became a municipality in 1867. During the ten years ending 1901 the income and expenditure averaged Rs. 12,000. In 1903–4 the income was Rs. 17,000, chiefly derived from octroi (Rs. 8,000) and rents (Rs. 3,000); and the expenditure was Rs. 23,000. The municipality has Rs. 10,000 invested. There is a considerable trade in the collection of grain and cotton for export to Muttra, and six cotton-gins and presses employed 580 hands in 1903. Kosī is, however, chiefly known for its large cattle market, one of the most important in this part of India, where more than 30,000 head of cattle are sold annually There are four schools with about 240 pupils.

Kosigi.—Town in the Adoni *tāluk* of Bellary District, Madras, situated in 15° 51′ N. and 77° 15′ E., on the north-west line of the Madras Railway. Population (1901), 7,748. It is built close under a hill between 400 and 500 feet high, the sides of which are covered with huge blocks of granite lying piled one upon the other in an absolute confusion, which can have been brought about by nothing short of severe earthquakes. The many rocky hills round about the town are conspicuous for the great size of the granite blocks which form them; and on one, just west of the railway about 3 miles south of Kosigi station, stands a tor which is perhaps the finest in Southern India. It consists of a huge tower-like mass, on the top of which are perched two upright, tall, thin blocks of granite, the whole being 80 feet high. It is conspicuous for miles in every direction, and is known to the natives as Akkachellalu ('the sisters'). Round the lower part of the hill under which Kosigi is built run ruined lines of fortifications. In the old turbulent days the place was the stronghold of a local chief, one of whose descendants is now its headman. Like others with similar pedigrees, he keeps his womankind *gosha*. The doings of his ancestors are commemorated on half a dozen of the *virakals*, or stones recording the deeds of heroes which are common all over the District, of more than ordinary size and elaboration. About a mile south of the town, in a corner between three hills, are five stone kistvaens. Only one is now intact. It is larger than such erections usually are. The industries include a tannery and the weaving of the ordinary cotton cloths worn by the women of the District. Kosigi was very severely affected by the famine of 1877, and in 1881 its population was 27 per cent. less than in 1871. But during the next decade its inhabitants increased at the abnormal rate of 44 per cent., and it is now a fairly flourishing place.

Kot.—Estate in the Fatahjang *tahsīl* of Attock District, Punjab, with an area of 88 square miles. The Ghebās, a tribe which claims alliance with the Siāls and Tiwānas, had long maintained a semi-

independence in the wild hill-country between the Indus and Sohān rivers, and acknowledged only the nominal supremacy of the Sikhs. Rai Muhammad, the Ghebā chief, rendered good service in 1830 to Ranjīt Singh against Saiyid Ahmad, the fanatical Muhammadan leader in Hazāra; and in 1848–9 and 1857 his son, Fateh Khān, stood by the British and received substantial rewards. Rai Fateh Khān wielded great influence in the country round Kot. On his death at an advanced age in 1894 he was succeeded by Sardār Muhammad Alī Khān, who died in 1903. The present chief, who holds a *jāgīr* worth about Rs. 4,400 a year and owns 27 villages, is a minor, and his estate is under the Court of Wards. The chiefs of Kot are great horse-breeders, and their stud is now systematically managed by the Court of Wards.

Kotagiri.—Hill station and planting centre in the Coonoor *tāluk* of the Nīlgiri District, Madras, situated in 11° 26′ N. and 76° 52′ E., at the north-east of the Nīlgiri plateau, 18 miles from Ootacamund and 12 from Coonoor. Population (1901), 5,100. The *tahsīldār* of Coonoor holds fortnightly criminal sittings here. The station was founded in 1830, and has grown but slowly. Its climate is preferred by many to that of Ootacamund, as it is warmer and less exposed to the south-west monsoon. It is connected with Mettupālaiyam on the plains in Coimbatore by a good road, 20 miles in length, with a uniform gradient of 1 in 18 The abandoned military sanitarium of Dimhatti lies just outside its limits. The Basel Mission has a station here.

Kotah State.—State in the south-east of Rājputāna, lying between 24° 7′ and 25° 51′ N. and 75° 37′ and 77° 26′ E., with an area of about 5,684 square miles. It is bounded on the north by Jaipur and the Alīgarh district of Tonk; on the west by Būndi and Udaipur; on the south-west by the Rāmpura-Bhānpura district of Indore, Jhālawār, and the Agar *tahsīl* of Gwalior; on the south by Khilchipur and Rājgarh; and on the east by Gwalior and the Chhabra district of Tonk. In shape the State is something like a cross, with a length from north to south of about 115 miles, and a greatest breadth of about 110 miles. The country slopes gently northwards from the high table-land of Mālwā, and is drained by the Chambal and its tributaries, all flowing in a northerly or north-easterly direction. The Mukandwāra range of hills (1,400 to 1,600 feet above sea-level), running across the southern portion of the State from north-west to south-east, is an important feature in the landscape. It has a curious double formation of two separate ridges parallel at a distance sometimes of more than a mile, the interval being filled with dense jungle or in some parts with cultivated lands. The range takes its name from the famous pass in which Colonel Monson's rear-guard was cut off by Holkar in 1804. It is for the most part covered with stunted trees and thick under-

growth, and contains several extensive game preserves. There are hills (over 1,500 feet above the sea) near Indargarh in the north, and also in the eastern district of Shāhābād, where is found the highest point in the State (1,800 feet). The principal rivers are the CHAMBAL, KĀLĪ SIND, and PĀRBATI. The Chambal enters Kotah on the west not far from Bhainsrorgarh, and for the greater part of its course forms the boundary, first with Būndi on the west and next with Jaipur on the north. At Kotah city it is, at all seasons, a deep and wide stream which must be crossed either by a pontoon-bridge, removed in the rainy season because of the high and sudden floods to which the river is subject, or by ferry; and very occasionally communication between its banks is interrupted for days together, as no boat could live in the turbulent rapids. Ferries are maintained at several other places. The Kālī Sind enters the State in the south, forms for about 35 miles the boundary between Kotah on the one side and Gwalior, Indore, and Jhālawār on the other, and, on being joined by the Ahu, forces its way through the Mukandwāra hills, and flows almost due north till it joins the Chambal near the village of Pīparda. The Pārbati is also a tributary of the Chambal. Its length within Kotah limits is about 40 miles, but for another 47 or 48 miles it separates the State from the Chhabra district of Tonk and from Gwalior. It is dammed near the village of Atru, where it is joined by the Andherī, and the waters thus impounded are conveyed by canals to about 40 villages and irrigate 6,000 to 7,000 acres. Other important streams, all subject to heavy floods in the rainy season, are the Parwan and Ujar, tributaries of the Kālī Sind, the Sukri, Bānganga, and Kul, tributaries of the Pārbati, and the Kunu in the Shāhābād district.

The northern portion of the State is covered by the alluvium of the Chambal valley, but at Kotah city Upper Vindhyan sandstones are exposed and extend over the country to the south.

The wild animals include the tiger, leopard, hunting leopard or cheetah, black bear, hyena, wolf, wild dog, &c.; also *sāmbar* (*Cervus unicolor*), *chital* (*Cervus axis*), *nīlgai* (*Boselaphus tragocamelus*), antelope, and 'ravine deer' or gazelle. The usual small game abound; and the rivers contain mahseer (*Barbus tor*), *rohu* (*Labeo rohita*), *lānchi*, *gūnch*, and other fish.

From November to February the climate is pleasant; in March it begins to get hot, and by the middle of June it is extremely sultry. The rains usually break during the first half of July, and from then till the middle of October the climate is relaxing and very malarious. The average mean temperature at the capital is about 82°. In 1905 the maximum temperature was 115° in May, and the minimum 49° in December.

The rainfall varies considerably in the different districts. The

annual average for the whole State is about 31 inches, while that for Kotah city (since 1880) is between 28 and 29 inches, of which about 19 inches are received in July and August and about 7 in June and September. In the districts, the fall varies from about 25 inches at Indargarh in the north and Mandāna in the west, to 37 at Bāran in the centre, and to over 40 at Shāhābād in the east and at several places in the south. The heaviest rainfall recorded in any one year exceeded 71 inches at Ratlai in the south in 1900, and the lowest was 14⅝ inches at Mandāna in 1899.

History.

The chiefs of Kotah belong to the Hāra sept of the great clan of Chauhān Rājputs, and the early history of their house is, till the beginning of the seventeenth century, identical with that of the Būndi family from which they are an offshoot. Rao Dewa was chief of Būndi about 1342, and his grandson, Jet Singh, first extended the Hāra name east of the Chambal. He took the place now known as Kotah city from some Bhīls of a community called Koteah, and his descendants held it and the surrounding country for about five generations till dispossessed by Rao Sūraj Mal of Bundi about 1530. At the beginning of the seventeenth century Ratan Singh was Rao Rājā of Būndi, and is said to have given his second son, Mādho Singh, the town of Kotah and its dependencies as a *jāgīr*. Subsequently he and this same son joined the imperial army at Burhānpur at the time when Khurram was threatening rebellion against his father, Jahāngīr; and for services then rendered Ratan Singh obtained the governorship of Burhānpur, while Mādho Singh received Kotah and its 360 townships, yielding 2 lakhs of revenue, to be held by him and his heirs direct of the crown, a grant subsequently confirmed, it is said, by Shāh Jahān. Thus, about 1625, Kotah came into existence as a separate State, and its first chief, Mādho Singh, assumed the title of Rājā. He was followed by his eldest son, Mukand Singh, who, with his four brothers, fought gallantly at the battle of Fatehābād near Ujjain in 1658 against Aurangzeb. In this engagement all the brothers were killed except the youngest, Kishor Singh, who, though desperately wounded, eventually recovered. The third and fourth chiefs of Kotah were Jagat Singh (1658–70), who served in the Deccan and died without issue, and Prem (or Pem) Singh, who ruled for six months, when he was deposed for incompetence. Then came three chiefs, all of whom lost their lives in battle. Kishor Singh I, who ruled from 1670 to 1686, was one of the most conspicuous of Aurangzeb's commanders in the South, distinguished himself at Bijāpur, and was killed at the siege of Arcot. His son, Rām Singh I, in the struggle for power between Aurangzeb's sons, Shāh Alam Bahādur Shāh and Azam Shāh, espoused the cause of the latter and fell in the battle fought at Jājau in 1707. Lastly, Bhīm Singh was killed in 1720

while opposing Nizām-ul-Mulk in his advance upon the Deccan. Bhīm Singh was the first Kotah chief to bear the title of Mahārao, and, by favouring the cause of the Saiyid brothers, he obtained the dignity of *panj hazāri* or leadership of 5,000; he also considerably extended his territories, acquiring, among other places, Gāgraun fort, Bāran, Māngrol, Manohar Thāna, and Shergarh. He was succeeded by his sons, Arjun Singh, who died without issue in 1724, and Dūrjan Sāl, who ruled for thirty-two years, successfully resisted a siege by the Jaipur chief in 1744, and added several tracts to his dominions. Then came Ajīt Singh (1756–9) and Chhatarsāl I (1759–66). In the time of the latter (1761) the State was again invaded by the Jaipur chief, with the object of forcing the Hāras to acknowledge themselves tributaries. An encounter took place at Bhatwāra (near Māngrol), when the Jaipur army, though numerically superior, was routed with great slaughter. In this battle the youthful Faujdār, Zālim Singh (*see* Jhālawār State), who afterwards as regent shaped the destinies of Kotah for many years, first distinguished himself. Mahārao Chhatarsāl was succeeded by his brother Gumān Singh (1766–71), and shortly afterwards the southern portions of the State were invaded by the Marāthās. Zālim Singh, who had for a time been out of favour, again came to the rescue and by a payment of 6 lakhs induced the Marāthās to withdraw.

Gumān Singh left a son, Umed Singh I (1771–1819); but throughout this period the real ruler was Zālim Singh, and but for his talents the State would have been ruined and dismembered. As Tod has put it:—

'When naught but revolution and rapine stalked through the land, when State after State was crumbling into dust or sinking into the abyss of ruin, he guided the vessel entrusted to his care safely through all dangers, adding yearly to her riches, until he placed her in security under the protection of Britain.'

Zālim Singh was celebrated for justice and good faith; his word was as the bond or oath of others, and few negotiations during the years from 1805 to 1817, the period of anarchy in Rājputāna, were contracted between chiefs without his guarantee. For the first time in the history of the State a settled form of government was introduced, an army formed, and European methods of arming and drilling were adopted. A new system of land revenue assessment was initiated, and the country was gradually restored to prosperity. In 1817 a treaty was made through Zālim Singh by which Kotah came under British protection; the tribute formerly paid to the Marāthās was made payable to the British Government, and the Mahārao was to furnish troops according to his means when required. A supplementary article (dated February, 1818) vested the administration in Zālim Singh and his heirs in regular succession and perpetuity, the principality being continued

to the descendants of Mahārao Umed Singh. Up to the death of the latter in 1819 no inconvenience was felt from this arrangement, by which one person was recognized as the titular chief and another was guaranteed as the actual ruler; but Mahārao Kishor Singh II (1819–28) attempted to secure the actual administration by force, and British troops had to be called in to support the regent's authority. In the battle that ensued at Māngrol (1821) the Mahārao was defeated and fled to Nāthdwāra (in Udaipur), where in the following month he formally recognized the perpetual succession to the administration of Zālim Singh and his heirs, and was permitted to return to his capital. The old regent—'the Nestor of Rājwāra,' as Tod calls him—died in 1824 at the age of eighty-four, and was succeeded by his son, Mādho Singh, who was notoriously unfit for the office, and who was in his turn followed by his son, Madan Singh. About the same time the Mahārao died and his nephew, Rām Singh II (1828–66), ruled in his stead. Six years later, the disputes between him and his minister, Madan Singh, broke out afresh; there was danger of a popular rising for the expulsion of the latter, and it was therefore resolved, with the consent of the chief of Kotah, to dismember the State and create the new principality of JHĀLAWĀR as a separate provision for the descendants of Zālim Singh.

This arrangement was carried out in 1838 and formed the basis of a fresh treaty with Kotah, by which the tribute was reduced by Rs. 80,000 and the Mahārao agreed to maintain an auxiliary force at a cost of not more than 3 lakhs (reduced in 1844 to 2 lakhs). This force, known as the Kotah Contingent, mutinied in 1857; it is now represented by the 42nd (Deoli) Regiment. The State troops likewise mutinied and murdered the Political Agent (Major Burton) and his two sons, as well as the Agency Surgeon; they also bombarded the Mahārao in his palace. The chief was believed not to have attempted to assist the Political Agent, and as a mark of the displeasure of Government his salute was reduced from 17 to 13 guns. Rām Singh, however, received in 1862 the usual *sanad* guaranteeing to him the right of adoption, and he died in 1866. For some years before his death the affairs of Kotah had been in an unsatisfactory condition; the administration had been conducted by irresponsible and unprincipled ministers, and the State debts amounted at his death to 27 lakhs. He was succeeded by his son, Chhatarsal II (1866–89), to whom Government restored the full salute of 17 guns. A few years later, the affairs of State fell into greater confusion than before, and the debts increased to nearly 90 lakhs. At last, the Mahārao, despairing of being able to effect any reform, requested the interference of the British Government, and intimated his willingness to receive any native minister nominated by it. Accordingly, in 1874, Nawāb Sir Faiz Alī Khān of Pahāsū was

appointed to administer the State, subject to the advice and control of the Governor-General's Agent in Rājputāna; and on his retirement in 1876 the administration was placed in the hands of a British Political Agent assisted by a Council. The arrangement continued till Chhatarsāl's death in 1889, and during this period many reforms were introduced, and the debts had been paid off by 1885. He was succeeded by his adopted son, Umed Singh II, who is the seventeenth and present chief of Kotah. His Highness is the second son of Mahārājā Chaggan Singh of Kotra, an estate about 40 miles east of Kotah city. He succeeded to the *gaddi* in 1889, received partial ruling powers in 1892, and full powers in 1896. He was educated at the Mayo College at Ajmer (1890-92), was created a K.C.S.I. in 1900, and was appointed an honorary major in the 42nd (Deoli) Regiment in 1903. The most important event of his rule has been the restoration, on the deposition of the late chief of the JHĀLAWĀR STATE, of fifteen out of the seventeen districts which had been ceded in 1838 to form that principality. Other events deserving of mention are the construction of the railway from the south-eastern border to the town of Bāran; the great famine of 1899–1900; the adoption of Imperial postal unity; the conversion of the local rupees and the introduction of British currency as the sole legal tender in the State. The annual tribute payable to Government by the treaty of 1817 was 2·9 lakhs. A remission of Rs. 25,000 was sanctioned in 1819, and, on the formation of the Jhālawār State in 1838, a further reduction of Rs. 80,000 was granted; but since 1899, when the fifteen Jhālawār districts were restored to Kotah, the tribute was raised by Rs. 50,000 and now stands at 2·3 lakhs, in addition to the annual contribution of 2 lakhs towards the cost of the Deoli Regiment.

Of interesting archaeological remains the oldest known is the *chaorī* at MUKANDWĀRA, belonging, it is believed, to the fifth century. The village of Kanswa, of which the old name was Kanvāshram, or the hermitage of the sage Kanva, about 4 miles south-east of Kotah city, possesses an inscription which is important as being the last trace of the Mauryas. It is dated in A.D. 740, and mentions two chiefs of this clan, Dhaval and Sivgan, the latter of whom built a temple to Mahādeo. Among other interesting places are the fort of GĀGRAUN; the ruins of the old town of Mau close by; the village of Chār Chaumu, about 20 miles to the north, with a very old temple to Mahādeo; and lastly Rāmgarh, 6 miles east of Māngrol, where there are several old Jain and Sivaite temples.

Population.

The number of towns and villages in the State is 2,613, and the population at each of the three enumerations was (1881) 517,275, (1891) 526,267, and (1901) 544,879. The apparent increase of 3½ per cent. in the last decade is due to

the restoration of certain Jhālawār districts in 1899. In 1891 the territory now forming the Kotah State contained 718,771 inhabitants. Thus, during the subsequent ten years, there was a loss of 173,892 persons, or 24 per cent., which is ascribed to the great famine of 1899–1900 and the severe epidemic of malarial fever that followed it. In 1901 the State was divided into fifteen *nizāmats* and 11 *tahsīls*, besides *jāgīr* estates, and contained 4 towns: namely, KOTAH CITY (a municipality), BĀRAN, MĀNGROL, and SANGOD.

The following table gives the principal statistics of population in 1901:—

Subdivision.	Number of Towns.	Number of Villages.	Population.	Percentage of variation in population between 1891 and 1901.	Number of persons able to read and write.
Anta *nizāmat* .	...	79	23,658	− 27·8	453
Bāran "	1	82	32,296	− 14·7	682
Barod "	...	75	15,977	− 31·6	396
Dīgod "	...	77	17,494	− 20·6	367
Etāwah "	...	61	18,019	− 22·0	238
Ghātoli "	...	78	9,628	− 52·0	160
Kanwās "	...	112	17,554	− 36·3	238
Khānpur "	...	85	18,500	− 29·8	234
Kishanganj "	...	105	15,206	− 25·8	147
Kūnjer "	...	62	15,692	− 27·2	212
Lādpura "	1	142	63,440	− 21·5	2,182
Mangrol "	1	74	27,473	− 14·1	362
Sangod "	1	118	23,832	− 26·8	382
Shergarh "	...	81	21,413	− 24·3	283
Tāraj "	...	118	19,775	− 40·0	127
11 *tahsīls* .	...	1,103	160,359	− 20·2	1,213
7 *kotris* or estates	..	157	44,613	− 19·9	609
State total	4	2,609	544,879	− 24·2	8,290

Of the total population, 487,657, or more than 89 per cent., are Hindus, the Vaishnava sect of Vallabhās being locally important; 37,947, or nearly 7 per cent., Musalmāns; and 12,603, or more than 2 per cent., Animists. The language mainly spoken is Rājasthānī, the dialects used being chiefly Hāraotī, Mālwī, and Dhūndārī (or Jaipurī).

Of castes and tribes the most numerous is the Chamārs. They number 54,000, or nearly 10 per cent. of the population, and are by hereditary calling tanners and workers in leather, but the majority now live by general labour or by agriculture. Next come the Mīnās (47,000), a fine athletic race, formerly given to marauding but now settled down into good agriculturists. The Dhākars (39,000) are mostly cultivators; the Brāhmans (39,000) are employed in temples or the service of the State, and many hold land free of rent; the Mālis (36,000) are market-gardeners and cultivators; the Gūjars (35,000) are

cattle-breeders and dealers, and also agriculturists. Among other castes may be mentioned the Mahājans (20,000), traders and money-lenders, and the Rājputs (15,000), the majority of whom belong to the Hāra sept of the Chauhān clan. The Rājputs look upon any occupation save that of arms or government as derogatory to their dignity; many of them are in the service of the State, chiefly in the army and police, or hold land on privileged tenures, but the majority are cultivators and, as such, lazy and indifferent. Taking the population as a whole, about 47 per cent. live solely by the land, and another 20 per cent. combine agriculture with their own particular trade or calling.

Of the 335 native Christians enumerated in 1901, all but 2 were returned as Presbyterians. The United Free Church of Scotland Mission has had a branch at the capital since 1899.

Agriculture.

The country is fertile and well watered. The soils are divided locally into three classes: namely, *kālī* (or *sar-i-māl*), a rich black loam containing much sand and decomposed vegetable matter; *utar-māl*, a loam of a lighter colour but almost equally fertile; and *bari*, a poor, gravelly, and sandy soil, of a reddish colour, often mixed with *kankar*. On the first two classes, fine crops of wheat, gram, &c., are grown without irrigation.

Agricultural statistics are available for about 4,778 square miles, or 84 per cent. of the total area of the State, comprising all the *khālsa* lands and detached revenue-free plots, and some of the *jāgīr* estates. After deducting 1,544 square miles occupied by forests, roads, rivers, villages, &c., or otherwise not available for cultivation, there remain 3,234 square miles, of which nearly 1,400, including about 40 square miles cropped more than once, are ordinarily cultivated each year, i.e. about 43 per cent. of the cultivable area. The net area cropped in 1903–4 was 1,315 square miles, and the areas under the principal crops were (in square miles): 381, or nearly 29 per cent., under *jowār*; 359, or about 27 per cent., under wheat; 197, or 15 per cent., under gram; 82 under linseed; 68 under *til*; 40 under both poppy and maize; 33 under cotton; and 20 under barley. There were also a few square miles under *san* (Indian hemp), indigo, *bājra*, tobacco, and rice.

The indigenous strain of cattle is of an inferior type, and all the best bullocks are imported from Mālwā. There is a little horse and pony-breeding. Sheep and goats are reared in considerable numbers, but are of no distinctive class.

Of the total area cultivated in 1903–4, 104 square miles, or between 7 and 8 per cent., were irrigated: namely, 87 from wells, 11 from canals, and about 6 from tanks and other sources. The wells are the mainstay of the State, and number over 24,000, more than half being of masonry. The water is for the most part lifted by means of leathern buckets drawn up with a rope and pulley by bullocks moving down an

inclined plane; but in a few places the *renth* or Persian wheel is used, and, in the case of shallow wells, the water is raised by a contrivance known as a *dhenkūi*, which consists of a pole, supported by a prop, with a jar or bucket at one end and a heavy weight at the other. Of canals, the most important has been mentioned in connexion with the Pārbati river. There are altogether about 350 tanks, of which 30 are useful for irrigation. The principal is that known as the Aklera Sāgar, which has cost about Rs. 80,000; it has, when full, an area of about 1½ square miles, and holds up 260 million cubic feet of water. Considerable attention is being paid to the subject of irrigation, and several promising works are under construction: notably the Umed Sāgar, in the Kishanganj district in the east, which is estimated to cost over 2 lakhs, and to have a capacity of more than 400 million cubic feet of water.

There are no real forests in Kotah, and valuable timber trees are scarce. The principal trees are teak, which, however, seldom attains any size, *babūl* (*Acacia arabica*), *bar* (*Ficus bengalensis*), *bel* (*Aegle Marmelos*), *dhāk* (*Butea frondosa*), *dhonkra* (*Anogeissus pendula*), *gūlar* (*Ficus glomerata*), *jāmun* (*Eugenia Jambolana*), *kadamb* (*Anthocephalus Cadamba*), *mahuā* (*Bassia latifolia*), *nīm* (*Melia Azadirachta*), *pīpal* (*Ficus religiosa*), *sālar* (*Boswellia serrata*), *semal* (*Bombax malabaricum*), and *tendū* (*Diospyros tomentosa*). The forests have never been regularly surveyed, but their area (including several large game preserves) is estimated at about 1,400 square miles. There was no attempt at forest conservancy till about 1880, and it is only within recent years that any real progress has been made. Several blocks have been demarcated and entirely closed to cutting and grazing, and plantations and nurseries have been started. The receipts—derived from grazing fees and the sale of wood, grass, and minor produce such as gum, honey, and wax—have risen from Rs. 37,000 in 1891–2 to over Rs. 69,000 in 1903–4, and the net revenue in the last year was Rs. 33,300.

The mineral products are insignificant. Iron is found near Indargarh in the north and Shāhābād in the east; the ore is rudely smelted, and the small quantity of metal obtained is used locally. Good building stone is found throughout the State.

Trade and communications.

The most important indigenous industry is that of cotton-weaving. The muslins of Kotah city have a more than local reputation; they are both white and coloured, the colours being in some cases particularly pleasing, and are occasionally ornamented by the introduction of gold or silver threads while still on the loom. Cloths are printed and dyed at the capital and several other places. The tie and dye work (called *chūndri bandish*) of Bāran is very interesting, but the demand for it is annually diminishing, probably because of the increased import of cheap printed foreign

cloths. Among other manufactures may be mentioned silver table-ornaments and rough country paper at the capital, embroidered elephant and horse-trappings at Shergarh, inlaid work on ivory, buffalo horn, or mother-of-pearl at Etāwah, lacquered toys and other articles at Gianta and Indargarh, and pottery at the place last mentioned. There is a small cotton-ginning factory at Palaita about 25 miles east of Kotah city; it is a private concern started in 1898, and when working gives employment to about thirty persons.

The chief exports are cereals and pulses, opium, oilseeds, cotton, and hides; while the chief imports are salt, English piece-goods, yarn, rice, sugar, *gur* (molasses), iron and other metals, dry fruits, leathern goods, and paper. The trade is mostly with Bombay, Calcutta, and Cawnpore, and the neighbouring States of Rājputāna and Central India. The opium, which is claimed to be as good as, if not superior to, the Mālwā product, is manufactured into two different shapes. That for the Chinese market, which is sent mostly to the Government dépôt at Bāran and thence to Bombay, is prepared in balls, while that for home consumption or for other States in Rājputāna—chiefly Bīkaner, Jaisalmer, and Jodhpur—is made up into cakes. The chief centres of trade are Kotah city and Bāran, and the principal trading castes are the Mahājans and Bohrās.

The only railway in the State is the Bīna-Bāran branch of the Great Indian Peninsula Railway, which was opened for traffic in May, 1899. The section within Kotah limits (about 29 miles) is the property of the Darbār, cost more than 17 lakhs, and has four stations. The net earnings of this section during the five years ending 1904 averaged Rs. 24,000 per annum, or a little less than 1½ per cent. on the capital outlay. The actual figures for 1904 were: gross earnings, Rs. 52,000; expenses, Rs. 26,000; and net profits, Rs. 26,000, or about 1·55 per cent. on the capital outlay. An extension of this line from Bāran to Mārwār Junction on the Rājputāna-Mālwā Railway has been surveyed, and the greater part of the earthwork within Kotah limits was constructed by famine labour in 1899 1900. A line from Nāgda (in Gwalior in the south) to Muttra has recently been sanctioned and work has commenced: it is to run via the Mukandwāra pass to Kotah city, and thence north-east through Būndi and past Indargarh.

The total length of metalled roads is 143 miles, and of unmetalled roads 410 miles; they were all constructed and are maintained by the Public Works department of the State. The more important metalled roads lead from the capital to Bāran, Būndi, and Jhālrapātan.

Prior to 1899 the State had a postal service of its own, which cost about Rs 5,000 annually; but in that year the Darbār adopted Imperial postal unity, and there are now 32 British post offices, 2 of which (at Kotah and Bāran) are also telegraph offices.

So far as records show, the famine of 1899–1900 was the first that ever visited the State. When in former times famines were devastating the surrounding districts, Kotah remained free from severe distress, and was able to help her neighbours with grain and grass. In 1804 the regent (Zālim Singh) was able to fill the State coffers by selling grain at about 8 seers for the rupee, and Kotah is said to have supported the whole population of Rājwāra as well as Holkar's army. In 1868, and again in 1877, the rains were late in coming, and the *kharif* crop was meagre; but the spring harvest was up to the average, and, though prices ruled high for a time, there was, on the whole, little suffering. The famine of 1899–1900 was severe, and the entire State was affected. The rainfall in 1899 was but 15½ inches, of which more than 7 fell on one day (July 8), and after that date the rain practically ceased. The out-turn of the *kharif* was 18 per cent. of the normal, and *rabi* crops were sown only on irrigated land. The advent of the railway to Bāran had created a greatly increased export trade, and the high prices prevailing in other parts of India tempted the dealers to get rid of their stores of grain in spite of the local demand. The difficulties of the situation were enhanced by an unprecedented wave of immigration from the western States of Rājputāna, and from Mewār, Būndi, and Ajmer-Merwāra. Thousands of needy foreigners poured into Kotah with vast herds of cattle, and by December, 1899, the grazing resources of the country had been exhausted. The Mahārao was insistent from the first on a generous treatment of the sufferers, and by his personal example did not a little to mitigate distress. Poorhouses were opened at the capital in September, 1899, and subsequently at other places, and relief works were started in October; other forms of relief were famine kitchens, the grant of doles of grain to the infirm and old and to *pardā-nashīn* women, advances to agriculturists, and the gift of clothes, bullocks, and seed-grain. More than six million units were relieved on works, and three millions gratuitously, at a cost of 7½ lakhs. The total expenditure, including advances to agriculturists, exceeded 9·5 lakhs, and over 15 lakhs of land revenue was suspended. The mortality among human beings was considerable, and, though the forests and grass-preserves were thrown open to free grazing, 25 per cent. of the live-stock are said to have perished.

Famine.

The administration is carried on by His Highness the Mahārao, assisted by a Dīwān. Since 1901 the administrative divisions have been remodelled, and there are now 19 *nizāmats* and 4 *tahsīls*. Each of the former is under a *nāzim*, and each of the latter under a *tahsīldār*, and these officers are assisted respectively by *naib-nāzims* and *naib-tahsīldārs*.

Administration.

For the guidance of its judiciary the State has its own codes, framed

in 1874 largely on the lines of the British Indian enactments, and amended from time to time by circulars issued by the Darbār. The lowest courts are those of the *tahsīldārs* (usually third-class magistrates) and *nāzims* (generally second-class magistrates); they can also try civil suits not exceeding Rs. 300 in value. Appeals against their decrees in criminal cases lie to one of three divisional magistrates (*faujdārs*), who are further empowered to pass a sentence of two years' imprisonment and Rs. 500 fine. Similarly, appeals against the decisions of *nāzims*, &c., in civil cases lie to one of two courts, which can also deal with original suits not exceeding Rs. 1,000 in value. Over the *faujdārs* and the two courts just mentioned is the Civil and Sessions Judge, who can try all suits of any description or value, and can pass a sentence of seven years' imprisonment and Rs. 1,000 fine. The highest court and final appellate authority is known as the *Mahakma khās*; it is presided over by the Mahārao, who alone can pass a death sentence.

The ordinary revenue in a normal year is about 31 lakhs, and the ordinary expenditure about 26 lakhs. The chief sources of revenue are: land about 24 lakhs, and customs about 4 lakhs. The chief items of expenditure are: army and police, 5 lakhs; tribute to Government, including contribution towards the cost of the 42nd (Deoli) Regiment, 4·3 lakhs; revenue and judicial staff (including *Mahakma khās*), 3·8 lakhs; public works department, 2·5 lakhs; palace and privy purse, 2·3 lakhs; charitable and religious grants and pensions, 1·8 lakhs; and *kārkhānas* (i.e. stables, elephants, camels, bullocks, &c.), 1·2 lakhs. In the disastrous famine year of 1899–1900 the receipts were about half the average, and the Darbār had to borrow from Government and private sources almost a year's revenue to enable it to carry on the administration and afford the necessary relief to its distressed population. The result is that the State now owes about 13 lakhs, though it has a large cash balance, besides investments.

Kotah had formerly a silver coinage of its own, minted at the capital and Gāgraun (probably since the time of Shāh Alam II), while in the restored districts the coins of the Jhālawār State were current. The rupees were in value generally equal, if not superior, to the similar coins of British India; but in 1899, when large purchases of grain had to be made outside the State, the rate of exchange fell, and at one time both the Kotah and Jhālawār rupees were at a discount of 24 per cent. The Darbār thereupon resolved to abolish the local coins and introduce British currency as the sole legal tender in the State. This very desirable reform was, with the assistance of Government, carried out between March 1 and August 31, 1901, at the rate of 114 Kotah (or 118 Jhālawār) rupees for 100 British rupees.

The land tenures are the usual *jāgīr*, *muāfi*, and *khālsa*, and it is estimated that the estates held on the first two tenures occupy about one-

fourth of the area of the State. The *jāgīrdārs* hold on a semi-feudal tenure, and are not dispossessed save for disloyalty or misconduct; they have the power of alienating a portion of their estates as a provision for younger sons or other near relatives, and they may raise money by a mortgage, but it cannot be foreclosed. No succession or adoption can take place without the Mahārao's consent, and in most cases a *nazarāna* or fee on succession is levied. The majority of the *jāgīrdārs* pay an annual tribute, and some of them have also to supply horsemen or foot-soldiers for the service of the State. Lands are granted on the *muāfi* tenure to individuals as a reward for service or in lieu of pay or in charity, and also to temples and religious institutions for their upkeep. They are usually revenue free. In the *khālsa* area the tenure of land was very widely changed early in the nineteenth century by the administrative measures of the regent, Zālim Singh. Before his time two-fifths of the produce belonged to the State, and the remainder to the cultivator after deduction of village expenses. Zālim Singh surveyed the lands and imposed a fixed money-rate per *bīgha*, making the settlement with each cultivator, and giving the village officers only a percentage on collections. By rigorously exacting the revenue, he soon broke down all the hereditary tenures, and got almost the whole cultivated land under his direct proprietary management, using the cultivators as tenants-at-will or as farm-labourers. A very great area was thus turned into a vast government farm; and while the proprietary status of the peasantry entirely disappeared, the country was brought under an extent of productive cultivation said to be without precedent, before or since, in Rājputāna. At the present time the chief claims to be the absolute owner of the soil, and no cultivator has the right to transfer or alienate any of the lands he cultivates. So long, however, as the cultivator pays his revenue punctually he is left in undisturbed possession of his holding, and if he wishes to relinquish any portion thereof he can do so in accordance with the rules in force. In some of the ceded districts the *manotidāri* system is in force, under which the *manotidār* or money-lender finances the cultivators, is responsible for their payments, and collects what he can from them, while elsewhere the land revenue system is *ryotwāri*.

The rates fixed by Zālim Singh remained more or less in force till about 1882–5 in the case of the restored tracts, and 1877–86 in the case of the rest of the territory, when fresh settlements were made, which are still in force. The rates per acre vary from 4½ annas to Rs. 5–8 for 'dry' land, and from Rs. 2–4 to Rs. 17–9 for irrigated land. A revision of the settlement is now in progress, operations having been started at the end of 1904.

The Public Works department has been under the charge of a qualified European Engineer since 1878, and the total expenditure down to

the end of 1905 amounts to about 80 lakhs. The principal works carried out comprise the metalled and most of the fair-weather roads, the masonry causeways over the Kālī Sind and other rivers, the pontoon-bridge over the Chambal, the earthwork of the proposed Bāran-Mārwār Railway, several important irrigation tanks and canals, the Mahārao's new palace (with electric light installation), the Victoria Hospital for women, numerous other hospitals and dispensaries, the Central jail, the public offices, resthouses, &c.

The military force which the Mahārao may maintain is limited to 15,000 men, and the actual strength in 1905 was 7,913 of all ranks: namely, cavalry 910 (609 irregular), artillerymen 353, and infantry 6,650 (5,456 irregular). There are also 193 guns, of which 62 are said to be unserviceable. The force cost about 4·8 lakhs in 1904–5, and is largely employed on police duties or in garrisoning forts. There are no British cantonments in Kotah; but under the treaty of 1838, as amended in 1844, the Darbār contributes 2 lakhs yearly towards the cost of the 42nd (Deoli) Regiment, of which His Highness has been an honorary major since January, 1903.

There are two main bodies of police: namely, one for the city (177 of all ranks) under the *kotwāl*; and the other for the districts, numbering 5,260, and including 3,490 sepoys and *sowārs* belonging to the army, and 1,668 *chaukīdārs* or village watchmen under a General Superintendent. The districts are divided into six separate charges, each under an Assistant Superintendent, and there are altogether 39 *thānas* or police stations and 516 outposts. Excluding the men belonging to the army, and the *chaukīdārs*, who receive revenue-free lands for their services, the force costs about Rs. 45,000 a year.

Besides the Central jail at the capital, there are small lock-ups at the head-quarters of each district, in which persons under trial or those sentenced to short terms of imprisonment are confined.

In regard to the literacy of its population, Kotah stands last but one among the twenty States and chiefships of Rājputāna, with 1·5 per cent. of the population (2·9 males and 0·1 females) able to read and write. The first State school was started in 1867, when two teachers were appointed, one of Sanskrit and the other of Persian. In 1874 English and Hindī classes were added; but this was the only educational institution maintained by the Darbār up to 1881, when the daily average attendance was 186. In 1891 there were 19 State schools with a daily average attendance of 752, and by 1901 these figures had increased to 36 and 1,106 respectively. Similarly, the State expenditure on education rose from about Rs. 4,000 in 1880–1 to nearly Rs. 9,000 in 1890–1, and to Rs. 25,000 in 1900–1. Omitting indigenous and private schools not under the department, there were 41 educational institutions maintained by the Darbār in 1905, and the number on the

rolls was 2,447 (including 115 girls). The daily average attendance in 1904–5 was 1,586 (75 being girls); and the total expenditure, including Rs. 5,000 on account of boys attending the Mayo College at Ajmer, was Rs. 33,000. Of these 41 schools, 39 are primary; and of the latter, 5 are for girls. The only notable institutions are the Mahārao's high school and the nobles' school, which are noticed in the article on KOTAH CITY. In spite of the fact that no fees are levied anywhere, and that everything in the shape of books, paper, pens, &c., is supplied free, the mass of the people are apathetic and do not care to have their children taught.

The State possesses 21 hospitals, including that attached to the jail, with accommodation for 216 in-patients. In 1904 the number of cases treated was 105,464 (1,808 being those of in-patients), and 3,765 operations were performed.

Vaccination appears to have been started about 1866–7 and is nowhere compulsory. In 1904–5 a staff of five men successfully vaccinated 16,351 persons, or 30 per 1,000 of the population. The total State expenditure in 1904–5 on medical institutions, including vaccination and a share of the pay of the Agency Surgeon and his establishment, was about Rs. 60,000.

[W. Stratton, *Kotah and the Hāras* (Ajmer, 1899); P. A. Weir and J. Crofts, *Medico-topographical Account of Kotah* (1900); *Kotah Administration Reports* (annually from 1894–5).]

Kotah City.—Capital of the State of the same name in Rājputāna, situated on the right bank of the Chambal in 25° 11′ N. and 75° 51′ E., about 45 miles by metalled road west of Bāran station on the Bīna-Bāran branch of the Great Indian Peninsula Railway, and about 120 miles south-east of Ajmer. It is said that, in the fourteenth century, some Bhīls of the Koteah clan who then lived here were attacked and ousted by Jet Singh, the grandson of Rao Dewa of Būndi, who settled in the place, and built a town which he called Kotah. It was held by Būndi till 1625, when, with its dependencies, it was granted by Jahāngīr to Mādho Singh, the first chief of Kotah, and became the capital of the State then formed. It has since increased in size and importance, and is now one of the eight cities of Rājputāna. It is surrounded on three sides by a high and massive crenelated wall, with well-fortified bastions at regular intervals, while on the west the river Chambal—400 yards wide and crossed by an iron pontoon-bridge, except in the rains, when the passage is made by ferry—forms a natural barrier. The city possesses six massive double gates closed nightly at 11 p.m., and may be divided into three well-defined and distinct areas, each separated from the next by a high wall: namely, Lādpura, Rāmpura, and the city proper, the latter including the old town or *purāni basti*. In the southern extremity is the old palace, an imposing pile

of buildings overlooking the river. Of the numerous temples, the most famous is that of Mathureshjī, the idol in which is said to have been brought from Gokul in Muttra, while the oldest is probably that of Nīlkanth Mahādeo.

The population has been gradually decreasing, as the following figures show: in 1881, 40,270; in 1891, 38,620; and in 1901, 33,657. This is said to be due partly to the fact that the place, situated on the western border of the State and at a considerable distance from the railway, is not a general trade centre, and partly because, with the improved administration and the greater security afforded to life and property, the people have spread more into the country. Another probable reason for the falling off in population is the unhealthiness of the site, caused by the water of the Kishor Sāgar (or lake) on the east percolating through the soil to the river on the west. The greater proportional decrease in the last decade is certainly due to the famine of 1899–1900 and the severe outbreak of malarial fever that immediately followed it. Of the total population in 1901, Hindus numbered 23,132, or nearly 69 per cent., and Musalmāns 9,027, or about 27 per cent. The principal manufactures are muslins, both white and coloured, silver table-ornaments, and a little country paper. An opportunity for seeing the various industries occurs each year, when an exhibition is held generally in February. A municipal committee, which was formed in 1874, has done much to improve the sanitation of the place. The income (derived mainly from an octroi duty on all imports) and the expenditure are each about Rs. 20,000 a year. The Central jail is a commodious and well-managed building, with accommodation for 468 prisoners. The daily average number in 1904 was 428, the expenditure exceeded Rs. 23,000, and the profits from manufactures (carpets, rugs, cotton cloth, &c.) were about Rs. 2,000. Excluding private educational institutions, there are 4 schools maintained by the State, which were attended in 1904–5 by about 400 boys and 30 girls. The Mahārao's high school and the nobles' school teach up to the matriculation standard of the Allahābād University. Attached to the high school is a class recently started for *patwāris*, in which surveying is taught; and the nobles' school has a boarding-house where the boys are fed and lodged free by the State. Including the hospital attached to the jail, there are four medical institutions at Kotah, with accommodation for 79 in-patients. The Victoria Hospital, reserved for females, was opened in 1890 and has 22 beds. Among places of interest in the neighbourhood of the city may be mentioned the Mahārao's new palace, called after him the Umed Bhawan, which is lighted with electricity; the extensive and well-kept gardens, containing a public library and reading-room; and several palaces, such as the Amar Niwās, the Brij Bilās, and the Chhatarpura.

Kotah-Jhālawār Agency.—Political Charge in the south-east of Rājputāna, lying between 23° 45′ and 25° 51′ N. and 75° 28′ and 77° 26′ E. It is bounded on the north by Jaipur and the Alīgarh district of Tonk; on the west by Būndi and Udaipur; on the south-west and south by several States of Central India and the Pirāwa district of Tonk; and on the east by Gwalior and the Chhabra district of Tonk. The head-quarters of the Political Agent are at Kotah. The population has varied: (1881) 857,763, (1891) 869,868, and (1901) 635,054. The decrease of nearly 27 per cent. during the last decade was due to the famine of 1899-1900 and the severe epidemic of malarial fever that followed it. The total area is 6,494 square miles, and the density of population is 98 persons per square mile, as compared with 76 for Rājputāna as a whole. As regards size the Agency ranks fifth, and as regards population seventh, among the eight political divisions of Rājputana. In 1901 Hindus formed 89 per cent. of the total and Musalmāns more than 7 per cent. There were also 356 Christians (including 340 natives). The Agency is made up of the two States shown below:—

State.	Area in square miles.	Population, 1901.	Normal land revenue (*khālsa*), in thousands of rupees.
Kotah . . .	5,684	544,879	24,00
Jhālawār . .	810	90,175	3,00
Total	6,494	635,054	27,00

There are altogether 3,017 villages and 6 towns; of the latter, the largest are KOTAH (33,657) and JHĀLRAPĀTAN CHHAONI (14,315).

Kotāria.—Estate and head-quarters thereof in Udaipur State, Rājputāna. *See* KOTHĀRIA.

Kotāyam.—*Tāluk* of Malabar District, Madras. *See* KOTTAYAM.

Kotāyam.—Town in Travancore State, Madras. *See* KOTTAYAM.

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